A History of the Federal Reserve Bank Of Chicago

By

JOHN A. GRISWOLD, A.M.

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF POLITICAL SCIENCE, COLUMBIA UNIVERSITY.

ST. LOUIS, MISSOURI
1936

VITA

John A. Griswold was born in Cerro Gordo, Illinois, January 17, 1907. He attended the Cerro Gordo public schools from 1913 to 1924, being graduated from the high school in June, 1925. During the following four years he attended the James Millikin University in Decatur, Illinois, and was graduated from that institution with honorable mention in June, 1929. During the remainder of 1929 and until June 1930 he studied for his Master of Arts degree in the Department of Economics of Columbia University, receiving his degree in June of the latter year. In the Fall of the year 1930, he was appointed Instructor in Economics at Butler University in Indianapolis, Indiana. He held this position for two academic years and one summer term, returning to New York in the Winter session of 1932 to study for his Doctor of Philosophy degree at Columbia University. After completing his residence work at the University, Mr. Griswold sold tear gas and machine guns. In February of 1935, he was appointed Instructor in Economics in the School of Commerce and Finance of St. Louis University in St. Louis, Missouri. This position he holds at the present time.

PREFACE

Many studies have been made of the operation of the Federal Reserve System, but the individual banks have been generally neglected. From the viewpoint of the country, the policy of the Federal Reserve System appearing as a policy of the whole, is important and significant, but it should be kept in mind that until very recently each reserve bank possessed a considerable amount of autonomy and acted within variable limits as a central bank. With this amount of self-government, the several district banks were enabled to deal with local situations and problems while still playing a part in carrying out the policy of the system. It is these peculiar problems, their solution by the district reserve banks and their effect on the execution of the policy of the Federal Reserve Board, which make significant the study of each Federal Reserve Bank.

In this study an attempt has been made to analyze the operation of the second largest bank in the country, the Federal Reserve Bank of Chicago, both in the light of these local problems of its district, the Seventh Federal Reserve District, and in the light of the national problems of the System as a whole.

Material for this study was gathered in the Library of Columbia University and the Economics Division of the New York Public Library in New York City; the Library of Congress and the Library of the Federal Reserve Board in Washington, D. C.; the Library of the Federal Reserve Bank of Chicago and the John Crerar Library in Chicago and the Library of the University of Illinois in Urbana, Illinois. Data was also obtained through interviews with financiers and bankers in New York City and Chicago and with many country bankers in the Seventh Federal Reserve District.

I wish to record my indebtedness and gratitude to Dr. H. Parker Willis, of Columbia University, for his encouragement during the process of preparing this book and for his valuable suggestions and criticisms regarding its content and form. I am also indebted to Professors Robert E. Chaddock, Carter Goodrich and Joseph Dorfman of Columbia University for their careful reading of the manuscript; and to Dr. John M. Chapman, Dr. B. H. Beckhart and Dr. Ralph West Roby of the Columbia University School of Business for their helpful suggestions. To Dr. Ivan Wright of the University of Illinois, I am grateful for making it possible to obtain certain valuable data, which, without his help, could not have been included in this study.

I acknowledge a debt of gratitude also to Mr. Edmund Platt, former Vice-Governor of the Federal Reserve Board, for his patient answers to my many questions, and to Dr. E. A. Goldenweiser,

Chief of the Research Division, and E. L. Smead, Chief of the Banking Division of the Federal Reserve Board, for permitting access to the Library of the Federal Reserve Board and the records of the Gold Settlement Fund.

I am indebted, also, to a number of Reserve bankers for making it possible to collect needed data: Mr. J. B. McDougal, former Governor; Mr. R. C. McKay and Mr. E. L. Dillard, Deputy Governors; Mr. Clifford S. Young, Assistant Federal Reserve Agent; and Mr. Harris G. Pett, Head of the Statistical Department, all of the Federal Reserve Bank of Chicago; and to Mr. C. M. Stewart and Mr. W. E. Peterson of the Federal Reserve Bank of St. Louis.

Among the large group of commercial bankers who made it possible for me to collect certain data difficult to obtain, I wish to acknowledge my indebtedness to Mr. H. L. Harrison and Mr. Walter Lichtenstein, Vice-Presidents, and Mr. Melvin Theis, Assistant Vice-President of the First National Bank of Chicago; Mr. Donald B. McDougal of the Northern Trust Company; and Mr. Paul Winegartner of the Livestock National Bank, as well as to the many other bankers throughout the Seventh District, who listened to my questions patiently and answered them willingly.

Needless to say, none of the gentlemen mentioned herein are responsible for any of the views or opinions which may be expressed in this book.

Acknowledgements of aid in the preparation of this book would not be complete without expressing my appreciation to Miss Ellen Scott Melrose for her valuable suggestions concerning phrasing and her careful typing of the manuscript.

J.A.G.

St. Louis, Mo.
December, 1935

TABLE OF CONTENTS

CHAPTER I

INTRODUCTION: CENTRAL BANKING IN THE UNITED STATES

The existing problems of central banking are not new for they were important in national economics before the Industrial Revolution had gained momentum. The Bank of England was founded in 1694 to overcome financial difficulties and in France the fantastic John Law appeared with his semi-practical schemes in 1716. Since the development of the factory system and extreme specialization of labor which have given rise to a delicate and complicated economic system, the problems of central banking have been of ever increasing importance. These issues have become so pervasive as to affect the destinies of cabinets in Europe and to be wielded as powerful weapons in the hands of American politicians.

The development of central banks in both Europe and America was similar insofar as the various systems were called forth by national necessity. The Bank of England was chartered to meet the financial needs of a government mistrusted by its people; the Bank of France was brought into being to serve the purposes of Napoleon; and the First and Second United States Banks were organized to stabilize the financing of an awkwardly and rapidly maturing nation. But here the similarity of development ceases. In Europe the establishment of central banks met little or no opposition and they have continued in their positions without serious question to the present day. In America, however, where the fetish of liberty has held sway, a strong central bank was an institution regarded with fear and distrust as a tool of the monied interests.

The first movement toward central banking in the United States took the form of the First and Second U. S. banks. But mistrust of the capitalistic interests on the Atlantic Seaboard felt by the western farmer and pioneer, resulted in the demise of these two institutions. The re-chartering of the First U. S. Bank was refused because it trampled upon the rights and liberties of the people, and to the popular western mind, it was an enemy of the first order. The fate of the Second U. S. Bank was no more fortunate; the sentiment against it is witnessed by the fact that Andrew Jackson won the presidency on a platform containing a plank which called for the destruction of the Bank.

Following these two experiments with central banks, the practice of uncontrolled unit banking was in vogue until the abuses of banking and currency became intolerable. In an attempt to protest the funds of the Government, at least, the Independent Treasury System was inaugurated to overcome the abuses of the "pet

banks" and yet avoid the popular fears of a central bank. At the same time, the States began to insist on higher banking standards and after the Supreme Court had upheld the right of a state to control banking, (Briscoe V. Commonwealth of Kentucky), state banking laws received popular support.

This turn of affairs marked the beginning of a slow but steady acceptance of the idea of a central bank in the United States as the people beagn to look to the Government for protection against the abuses of their own banks. Although this shift of sentiment was not immediately strong enough to permit a central banking institution to be founded, it did allow the National Government in 1863 to enter into competition with state governments in the chartering of banks and it also supported the abridgement of note issue rights of the state banks in 1869.

American banking practice, with the reforms mentioned above, was tolerated until the Panic of 1907 when bankers became particularly impressed with the need for banking and currency reform. As a result of agitation on the part of bankers and the conclusions of thinking people, two rival plans of reform developed, the Aldrich Plan and the Owen-Glass Bill. Although popular sentiment in the United States had changed considerably since 1863, the fear of centralization still prevailed sufficiently to cause scepticism of the Aldrich Plan, in spite of its provision for local currency associations. Further scepticism resulted from a mistrust of Senator Aldrich's Wall Street connections. For these reasons, popular support went rather to the regional and decentralized plan of the Owen-Glass Bill, which was finally adopted as the Federal Reserve Act in 1913.

The passage of this Act marks quite definitely the changed attitude of the American people toward central banking. Whereas in 1836 any institution remotely resembling a central bank was feared, in 1913 a plan was adopted which established what was to all intents and purposes a central bank. Now there are indications that popular sentiment will favor even further centralization as plans that amount to the elimination of the regional banks and the formation of one central bank are well received in Congress and have popular support among the citizenry.

The Federal Reserve Act as passed provided for regional reserve banks, the number to be set between eight and twelve at the discretion of the Organizing Committee. (This Committee finally decided upon twelve banks as being the proper number to serve the country adequately and in accordance with this decision, twelve Federal Reserve Banks were established.) Under the powers given to these regional banks by the Federal Reserve Act, each bank became autonomous except in certain matters of general policy

such as rules regarding eligibility of paper for rediscount, the final determination of the rate of discount and the control and direction of the clearing system.

Despite these limitations, each regional Reserve Bank possesses characteristics of a central banking nature very similar to those of European central banks. Each Reserve Bank is permitted to issue currency as are the central banks of Europe, but the power of the Reserve Banks differs from that of some European banks in that the former are not the sole source of currency in the United States whereas in France, for example, the Bank of France has a monopoly on currency issue. Concurrent with the privilege of note issue, both the Federal Reserve Banks and the central banks of Europe hold a large part of the gold reserve of their respective countries. The powers of the United States regional Reserve Banks extend to include the custody of the reserves of member banks, a power which many European central banks have only in modified form where it is permissable for commercial banks to keep their reserves with the central bank if they wish, as in England. Another important central banking function which Federal Reserve Banks possess in common with European central banks is the power of rediscounting for commercial banks. As indicated above, however, the terms under which this process takes place in the United States are regulated by a body outside the regional banks, namely the Federal Reserve Board, whereas in both the Bank of England and the Bank of France the terms of rediscounting are determined by the banks themselves. Nevertheless, in spite of regulation by the Federal Reserve Board, the regional banks are agencies of rediscount and so perform this central banking function. A further analogy between the regional Reserve Banks and the central banks of Europe consists in the fact that all perform the functions of fiscal agent for their governments. In the United States this function is limited of course to the boundaries of the district of each regional bank whereas in Europe a single central bank functions as sole fiscal agent for its government, as in the case of the Bank of England, the Bank of France and the Riksbank in Sweden.

Since each Federal Reserve Bank possesses power similar to the power of European central banks, it may be correctly assumed that each regional Reserve Bank is in itself a local central bank and that therefore any judgment which is applied to them is a judgment in the field of central banking. In view of the fact that each Reserve Bank maintains a separate identity and operates in a distinct district, each has its own peculiar problems to solve and deals with them in its own way with the result that each bank has a unique character and background.

The character of the Chicago Reserve Bank and its background,

the Seventh Federal Reserve District, have furnished the field of observation and examination for this book. Chicago is the second most important financial center in the United States and the Seventh District includes one of the richest agricultural areas as well as one of the most active manufacturing districts in the country; these facts make the results of the Chicago Bank's operation of peculiar interest.

CHAPTER II.

MIDDLE WESTERN BANKING STRUCTURE AND CREDIT PRACTISE

The Seventh Federal Reserve District is situated in the heart of one of the most densely populated areas in the United States as well as one of the richest agricultural and manufacturing sections. When the Seventh District was organized it had a population of 12,348,767 living in an area of 187,340 square miles. The state of Iowa was the only state to be wholly included within the District, only portions of the other four states being within the boundaries. Since the organization of the District in 1914, the population has steadily increased; by 1932, there were 18,721,000 people, or 15% of the population of the United States, living in the Seventh District.[1]

Table 1.

POPULATION OF STATES AND PARTS OF STATES, SEVENTH FEDERAL RESERVE DISTRICT 1930*

State	Number of Counties	Square Miles Area	Population
Illinois	58	35,448	6,505,000
Indiana	68	26,707	2,660,000
Iowa	Entire State	55,586	2,479,000
Michigan	45	40,789	4,655,000
Wisconsin	45	31,810	2,422,000
Total		190,340	18,721,000

*Computed from the 14th Report of the U. S. Census Bureau.

In 1932, the portion of Illinois within the District was the most densely populated area with an average of 184 people per square mile, and Iowa was least densely populated with an average of 44 people per square mile. Averages per square mile for the other states were: 114 in Michigan; 99 in Indiana; and 75 in Wisconsin.

The most important population and industrial center in the District is located at the foot of Lake Michigan and includes the area of Chicago, its suburbs in Illinois, the northern Indiana industrial area, and the manufacturing district contiguous to Milwaukee. There is another densely populated region in the eastern

1 Computed from the 14th Report of the U. S. Census Bureau.

section of the district including Detroit and its environs. Smaller centers of population and industry are scattered throughout the outlying sections of the District in the vicinity of such cities as Indianapolis, Grand Rapids and Lansing, Michigan, Des Moines, Iowa and Peoria, Illinois. These increases in population since 1914 are reflected in the growth of Seventh District cities; In 1919 there were 50 cities with population of 25,000 or over; in 1929 the number had increased to 56.[2]

The industry of the Seventh District is composed mainly of agriculture and manufactury, mining being relatively unimportant. The agricultural activity of the Seventh District is largely small grain farming, horticulture and live stock production. Wheat and maize are the most important small grains raised, although oats, rye and barley are important in many sections. Illinois produces the largest volume of wheat; Indiana and Iowa are next in importance as producers. In the production of maize these same three states are the most important although in this case Iowa leads in output and is followed by Illinois and Indiana. The raising of oats is important in all the states of the corn belt, but rye and barley are more generally raised in the cooler régions of Michigan and Wisconsin. These latter two states also are large producers of fruits and vegetables, mainly, Irish potatoes, sweet corn, peas, peaches and apples. In all the states in the district the production of livestock for both dairy and beef purposes is important.[3]

The production of these agricultural products took place on between 700,000 and 900,000 farms comprising an area varying from 89,300,000 acres to 93,000,000 acres. The number of farms and total acreage varied widely during the decade 1919-1929 with a tendency to decrease.[4]

Table 2

FARMS IN THE SEVENTH FEDERAL RESERVE DISTRICT

	Number of Farms		Land in Farms (Acres)	
States	1919	1929	1919	1929
Illinois	150,090	128,612	10,612,573	9,371,295
Indiana	163,707	134,619	15,475,821	14,812,124
Iowa	213,439	214,928	33,474,896	34,019,332
Michigan	185,010	158,285	18,298,181	15,508,718
Wisconsin	137,895	129,812	16,023,304	15,629,749
Total	850,141	766,256	93,884,775	89,341,218

*Compiled from the 13th and 14th Reports of the United States Census Bureau.

2 See Appendix A.
3 Smith, J. Russell, *Industrial and Commercial Geography*, p. 60.
4 Compiled from 14th Report of United States Census Bureau. See Appendix A.

Seventh District manufacturing is carried on mainly in 56 cities with population of 25,000 or over. In the leading industrial center, the Chicago area, meat packing, petroleum refining, distilling, machinery and tool making, and iron and steel manufacturing are the leading industries. In the eastern manufacturing center, Detroit, automobile production is most important. In smaller centers, flour and grist milling, leather tanning and shoe manufacturing are important. The northern portion of the district is noted for its canning industry as well as its cheese products. Lumbering is important on the lower Michigan peninsula, as is the production of salt. Minor industries scattered throughout the District are: electroplating, cotton processing, clothing manufacturing, and the production of paint and glass. In 1929, the Seventh District produced approximately 23% of the total value of the manufacturing output of the country.[5]

In number of establishments, number of wage earners and value of products, Illinois is the leading state of the group and Iowa is least important. Michigan is second in importance and Wisconsin and Indiana qualify about equally for third place.[6]

The leading minerals produced in this area are coal, petroleum, iron, gypsum, lead and zinc. Petroleum and natural gas are important in certain scattered sections of Illinois and Indiana. Iron and copper are produced in Michigan and Wisconsin, but only small amounts within the boundaries of the Seventh District. Gypsum is mined in Iowa and Michigan produces lead and zinc.[7]

The natural resources which permits the Seventh District to support a large population, could not have been developed without adequate transportation facilities. As a result of the immense potential traffic of this area, it has been crossed and recrossed by railroad lines. Chicago, the leading city of the District, has become one of the greatest railroad centers in the world as it is served by 24 trunk-line railroads which connect it with all parts of the United States. This network of railroads centering in Chicago gives every part of the Seventh District over-night service to that city in spite of the fact that some points are 600 miles distant.

In 1913 there were 288 trains entering and leaving Chicago daily. Forty-one of these came from the north and 37 left for points in that direction; there were 45 trains daily to and from the south; 53 came from the east and 56 returned eastward; there were 45 trains daily in each direction west of Chicago.[8]

By 1934, there were 547 passenger trains daily entering and leaving Chicago terminals to and from points 100 miles distant; 72 of these come from the north and 58 leave for points in that direc-

5 Idem. 6 Idem. (See Appendix A.)
7 Idem.
8 Compiled from *The Official Railway Guide of the United States*, June, 1913.

tion. Serving the territory south of Chicago, 49 trains leave daily and 48 enter. Seventy-four trains leave daily for the west and 68 enter from that direction. Travel eastward from Chicago is handled by 95 trains, and travel coming from the east by 83 trains.[9]

In addition, many parts of the District are served by paved highways. Illinois, Indiana and Michigan have particularly efficient highway systems.

INFLUENCE OF THE ECONOMIC STRUCTURE ON THE BANKING SYSTEM

The two most important industrial activities of the Seventh District, manufacturing and agriculture, are exact antitheses of each other in their effects on the banking structure. The nature of large scale manufacturing necessitates a concentration of population and wealth, whereas on the other hand, the decentralized character of agriculture tends to prevent the growth of large centers and encourages the small trading community with but a limited amount of capital. As a result of these two forces, two types of commercial banks developed in the District. In the cities, where concentration of population and large industrial plants made possible large deposits and large capitalization, great banking institutions evolved to meet the demands for great blocks of credit made necessary by mass production. In small farming communities where deposits were small and capital was comparatively scarce, small banks necessarily served the farmers' credit needs.

However, the small country banks did not remain altogether independent of the city institutions. They found it expedient to establish correspondent relationships in the cities for two important reasons. First, rural banking of necessity dealt in agricultural credits which, because of the nature of the industry, are not as liquid as the commercial credits of the city bank. In order to have access to a readily obtainable liquid reserve fund, the country bank established an account with a city bank in connection with which it was given the privilege of rediscounting its paper. The second reason for the development of the city and country bank relationships was the need for some machinery whereby checks could be readily cleared and transfers made. The city correspondent served this purpose admirably, giving the country banks indirectly advantages of the city clearing house. In order to secure these profitable accounts from country banks, city banks performed many other services for rural customers in the competitive effort to secure this business.

The two types of commercial banks and the mutually beneficial correspondent relationships between them, have developed out of

[9] Compiled from the *Railway Guide*, July, 1934.

the industrial conditions prevailing in the Seventh District. This satisfactory inter-dependence between city and rural banking has obviated any practical necessity for branch banking. However, although branch banking is at present prohibited in all Seventh District states except Michigan, the well developed correspondent system could serve as a stable foundation for a change to a branch banking system without any serious disturbance of the financial structure. With the declining number of small banks and the development of more rapid transportation facilities, it is not unreasonable to expect that brancch banking may develop throughout the Seventh District in the not far distant future.

The structure of banking and the terms of credit practise in those states from which the Seventh Federal Reserve District was formed, were appropriate to the diverse credit needs of that section of the country and lacked uniformity in accordance with these diverse needs. Manufacturing and agriculture both required long term credit in order to improve their productive processes, and both needed short term credit in order to produce as well as to market their products. These diverse requirements and the widely varied banking laws governing organization and operation of banks, resulted in a lack of structural uniformity among financial institutions. However, two general groupings of credit institutions in the Middle West may be made: long term credit institutions and short term credit institutions. The first group may be further divided into institutions which supply the needs of manufacturing establishments and those which meet the requirements of agriculture and real estate improvement. Commercial banks in general meet the short term loan requirements of both manufacturing and agriculture.

Bank Structure

LONG TERM CREDIT

The long term credit needs of manufacturing in the Middle West are met by three types of banking institutions: investment banks, savings banks and trust companies. In the strict sense of the word, investment houses do not provide the actual credit but rather perform the necessary and useful function of acting as agents in distributing long term securities, stocks, bonds and notes to the investors. At the time of the organization of the Federal Reserve System in 1914, there were between 20 and 30 investment houses in the five states which compose the Seventh District, the majority of these being in Chicago, which was the principal financial center of this section of the United States. By 1929 the number of such financial institutions had increased to 68, 44 of which were

located in Chicago, but between this year and 1933, the number declined to 62, 40 of which were in Chicago.[10]

Savings banks and trust companies, as well as individuals are large investors in the long-term securities distributed by investment banks. When the Seventh District was organized there were 1000 stock savings banks in the three Seventh District States, Michigan, Wisconsin and Iowa,[11] with a combined capital of over $40,500,000. After 1929, savings banks along with investment houses, decreased in number; in 1933, 196 savings banks were in operation in Michigan and Iowa, with a combined capital of only $8,562,000.[12] Mutual savings banks have not been so popular in the Central West as other types of banks. In 1914 there were but 10 such institutions in existance in Seventh District States, five each in Indiana and Wisconsin. By 1933, there were four in Indiana and two in Wisonsin.[13]

In 1914, 226 loan and trust companies operated in the five Seventh District states with a combined capital of $62,780,000, but by 1933 the number had dropped to 93 and the capital to $18,760,000. Indiana possessed the largest number of these institutions in both 1914 and 1933, 131 and 71 respectively; Michigan had the smallest number in 1914, namely 6; and Iowa the smallest number in 1933, namely 5. Loan and trust companies had also declined in importance in Wisconsin and none were in existence in Illinois.[14]

Long term credit for agricultural and real estate needs in the Middle West is provided in the main by the Federal Land Banks and by Building & Loan Associations. The Land Banks were organized to provide the farmer with adequate credit by tapping the source of investments from which the manufacturers obtained capital; by loaning to farmers' associations on mortgage security and issuing bonds against these mortgages, which bonds were sold to the investing public in convenient denominations. In 1917, the year of the organization of the Federal Land Banks, these institutions made 2,245 loans amounting to $5,546,545 in Illinois, Indiana, Iowa, Michigan and Wisconsin. By 1925 the number of farm loans had increased to 4,460 and the amount of $30,165,300. After 1929, demand for land bank loans increased still further, loans of $17,580.800 having been made in 1929 and of $55,706,600 in 1933. The increase in recent years has been due to the operation of farm relief agencies through the Land Bank System.[15]

10 Compiled from *"Security Dealers of North America,"* 1929 and 1933; 1914 figures estimated.
11 There were no stock savings banks in Illinois and Indiana.
12 Compiled from the Reports of the Comptroller of Currency, 1914 and 1933.
13 Idem.
14 Idem.
15 Data obtained by letter from the Federal Land Banks of Omaha, Louisville and St. Paul and by interview from the Federal Land Bank of St. Louis.

In the financing of real estate improvements, Building & Loan Associations have played a large part in the Middle Western States. These associations which are cooperative enterprises, had a phenomenal growth in Illinois, Michigan and Wisconsin, particularly between 1891 and 1910,[16] although since 1910 the rate of growth has been less rapid. In 1914 there were 1132 Associations in the five Seventh District states, having a membership of 482,731 and assets of $192,395,000; in 1933 there were 1627 associations with a membership of 1,716,768 and assets of $1,165,499,000.[17]

On the whole, then, long term banking structure in the Middle West during this period showed two conflicting tendencies towards change: first, the increasing importance of investment houses, Federal Land Banks and Building & Loan Associations; and on the other hand, the declining importance of savings banks and of loan and trust companies.

SHORT TERM CREDIT

Three types of commercial banks providing short term credit predominate in the Middle West; national banks, state banks and private banks. Since 1921 the tendency to restrict private banking has resulted in the most important part of the banking structure being composed of banks under the control of governmental agencies. In 1921, all private commercial banks were prohibited by law in Illinois;[18] Iowa prohibited further extension of private banks in 1919[19] and Michigan in 1925.[20] Indiana is now the only state in this section which possesses private banks of any importance.

At the time of the organization of the Reserve System, in the five states Illinois, Indiana, Iowa, Michigan and Wisconsin, there were 1,293 national banks with a combined capital of $161,925,000; 2,229 state banks with a capital of $192,118,000; and 593 private banks with a capital of $10,436,000. A comparison of the capitilization of these types of institutions shows that the largest banks of the section were national banks, the second largest state banks and the smallest, private banks.[21] When the Seventh District was organized, 74% of the above mentioned number of national banks were included in the District's boundaries, representing 84% of the above mentioned national bank capital; approximately 60% of the

---

16 Willis, H. P., and Chapman, J. R., *"The Banking Situation,"* p. 285.
17 Compiled from Reports of the Comptroller of Currency, 1914 and 1933.
18 Illinois: *An Act to Revise the Law With Relation to Banks and Banking*: Approved June 3, 1919; amended June 8, 1921. Section 15½.
19 Iowa Code, Section 9151.
20 Michigan: *Banking Law,* Act 284, Section I.
21 Average capitalization of National Banks, $124,000.
Average capitalization of State Banks, $86,000.
Average capitalization of Private Banks, $17,000.

state banks in the five states were within District boundaries, representing 65% of the state bank capital.[22]

From the time of the organization of the Reserve System until 1931, state banks were predominant in the Seventh District. After 1931, although national banks still did not exceed state banks in numbers and resources, they became a more important factor in Seventh District banking structure as smaller banks failed and diminished in number.

NUMBER OF BANKS[23].

Throughout the entire period 1914 to 1933, state banks have outnumbered national banks in the Seventh District. In 1914 approximately 77% of government supervised commercial banks were state banks; by 1928, 80% were operating under state charters. By 1933 the total number of banks in the District had increased but of this total 90% were state banks.

An analysis by individual states indicates that the portion of Michigan in the Seventh District possessed the largest percentage of state banks during each year for which data was available except 1933. Throughout the period, Wisconsin ranked next to Michigan in predominance of state banks, and Illinois generally possessed the smallest number in relation to national banks.

Table 3

NUMBER OF NATIONAL AND STATE BANKS
SEVENTH FEDERAL RESERVE DISTRICT

	1914	1919	1922	1923	1925	1927
National	958	1048	1111	1062	1059	994
State	*	*	4194	4112	*	3964
Total			5305	5174		5958
	1928	1929	1930	1931	1932	1933
National	964	960	900	809	673	398
State	3844	3814	3619	3327	2632	2112
Total	4808	4774	4519	4136	3305	2510

*Data not available.

22 Compiled from Reports of the Comptroller of Currency, 1914.

23 Since data were not available for the Seventh Federal Reserve District in the case of long term credit banking institutions, this phase of the subject was necessarily considered by states. However, through the courtesy of the Statistical Department of the Federal Reserve Bank of Chicago, data relating to commercial banking structure of the Seventh District were made available and therefore the discussion of this subject is limited to the boundaries of the District; the tables in this section have been compiled from these data. Data were not available for private banks which necessitated their being eliminated from the calculations; however, the importance of private instructions has been on the decline since 1921 and such banks have practically disappeared from every state but Indiana.

Table 4.

PERCENT: NATIONAL AND STATE BANKS OF TOTAL BANKS SEVENTH FEDERAL RESERVE DISTRICT

N—National S—State

	1922		1923		1927	
	N	S	N	S	N	S
Illinois	24.6	75.4	24.3	75.7	24.4	75.6
Indiana	21.7	78.3	21.9	78.1	21.1	78.9
Iowa	20.9	79.1	22.0	78.0	20.8	79.2
Michigan	13.4	86.6	13.3	86.7	14.0	86.0
Wisconsin	14.7	85.3	14.7	85.3	14.0	86.0

	1928		1929		1930	
	N	S	N	S	N	S
Illinois	24.4	75.6	25.6	74.3	25.9	74.1
Indiana	21.3	78.7	21.4	78.6	21.9	78.1
Iowa	21.4	79.6	20.6	79.4	19.9	80.1
Michigan	14.0	86.0	14.1	85.9	13.3	86.7
Wisconsin	15.2	84.8	15.2	84.8	15.4	84.6

	1931		1932		1933	
	N	S	N	S	N	S
Illinois	26.1	73.9	28.0	72.0	26.8	73.2
Indiana	21.7	78.3	21.7	78.3	14.0	85.1
Iowa	19.3	80.7	20.2	79.8	14.0	86.0
Michigan	15.5	86.5	13.8	86.2	12.6	87.4
Wisconsin	15.0	85.0	14.7	85.3	9.9	90.1

CAPITAL FUNDS

In only one year did national bank capital in the Seventh District exceed state bank capital; this situation occurred in 1933 when the capitalization of national banks was $30,000,000 greater. Although with this exception total state bank capital has been larger, average capitalization per individual has been smaller for state banks than for national banks; in 1922, average capitalization of state banks was 74,500 and that of national banks $162,000; in 1933 the respective averages were $77,000 and

$498,000. This increase in average capitalization was due to the failure of smaller banks, particularly after 1929.

From 1922 to 1933, in each state of the District except Illinois, state banks held the greater share of bank capital. In 1931 and 1932, the capital of Illinois state banks actually increased, but in 1933 suddenly dropped to 50% of the capital of national banks. This seemingly unnatural trend and sudden change was due to the fact that the Continental Illinois National Bank, one of the largest banks in the United States, became a state bank and then in the latter part of 1932, reverted to a national charter.

Table 5.

CAPITAL OF STATE AND NATIONAL BANKS
SEVENTH FEDERAL RESERVE DISTRICT

(As of June each year. 000 omitted.)

	1914	1919	1922
National	$136,772	$159,676	$172,121
State	192,118	*	309,926
Total	$328,890		$482,047

	1923	1925	1927
National	$174,148	$183,536	$190,487
State	327,890	*	366,635
Total	$502,038		$557,122

	1928	1929	1930
National	$201,813	$190,165	$200,165
State	363,347	432,045	420,069
Total	$565,160	$623,210	$621,074

	1931	1932	1933
National	$177,805	$150,395	$197,329
State	325,502	304,012	166,001
Total	$503,307	$454,407	$363,330

*Data not available.

Table 6.

PERCENT: NATIONAL AND STATE BANK CAPITAL OF TOTAL CAPITAL
SEVENTH FEDERAL RESERVE DISTRICT
(As of June each year)

N—National S—State

	1922		1923		1927	
	N	S	N	S	N	S
Illinois	38.8	61.2	37.3	62.7	36.0	64.0
Indiana	39.9	60.1	40.3	59.7	40.7	59.3
Iowa	31.8	68.2	28.0	72.0	34.2	65.8
Michigan	24.8	75.2	23.3	76.7	23.1	76.9
Wisconsin	57.5	42.5	42.2	57.8	42.1	58.9
	1928		**1929**		**1930**	
	N	S	N	S	N	S
Illinois	39.3	60.7	27.8	72.2	30.0	70.0
Indiana	40.9	59.1	41.1	58.9	56.3	43.7
Iowa	39.4	60.6	39.5	60.5	39.5	60.5
Michigan	76.9	21.1	78.9	23.2	76.8	23.4
Wisconsin	41.6	58.4	47.3	52.7	47.3	52.7
	1931		**1932**		**1933**	
	N	S	N	S	N	S
Illinois	27.6	71.4	25.5	74.5	67.8	32.2
Indiana	55.9	44.1	31.4	68.6	45.2	54.8
Iowa	39.3	60.7	39.5	60.5	28.4	71.6
Michigan	76.6	26.6	73.4	48.3	51.7	48.1
Wisconsin	46.8	53.2	47.8	52.2	43.9	56.1

In 1933 the Roosevelt Administration passed an Emergency Banking Act. By this act, if the capital of a bank, either national or state, had been impaired, preferred stock could be issued.[24] On December 31, 1933, 33 Seventh District national banks had taken advantage of this provision of the act: 12 banks in Illinois, 6 in Indiana, 2 in Iowa and 13 in Michigan; or 8.6% of the national banks in the District. Since the Reconstruction Finance Corporation has purchased most of this stock the Government has invested the largest amount in Illinois, namely $51,710,000, of which $51,000,000 went to one Chicago bank. To six Indiana banks, the Government had subscribed $3,920,000. In Iowa $3,560,000 had been invested of which over $3,000,000 was subscribed to one bank. In Michigan, over $13,000,000 went to one Detroit bank of the $14,864,000 invested in the entire state. The total capital sub-

scribed in the District was $74,054,000, an amount equal to 37.4% of the entire national bank capitalization of the District. The Government, therefore, has a large stake in the success of Seventh District banking institutions.[25]

In spite of the fact that Seventh District state banks possessed a larger amount of capital than national banks, the latter surpassed the former in the amount of surplus and undivided profits. In 1922 national banks had a surplus relative to capital of 64.4%, and state banks of 57.8%. By 1929 the differential was materially decreased, national banks having surplus of 67.8% of their capital and state banks, 67.6%. By 1933 the respective percentages had decreased to 53.8% and 43.3%.

Considering the total surplus in individual states of the District from 1922 to 1931, it appears that state banks in exery state except Wisconsin held the greater amount of surplus in accordance with their predominance in numbers. For the one year, 1932, national banks in Michigan increased their percentage over that of state banks. In 1933, the same situation occurred in Illinois. However, in 1933, national banks in Iowa and Indiana showed marked decreases, their surplus dropping to less than half the amount held by state banks. This can be accounted for in Indiana and Iowa by the greater attention given by national than by state banks to the writing off of losses, and in Illinois and Michigan by the failure of many small national banks with large banks controlling the bulk of resources.

The relation between undivided profits of national and State banks shows a trend similar to that of surplus.

Table 7.

SURPLUS OF NATIONAL AND STATE BANKS
SEVENTH FEDERAL RESERVE DISTRICT
(As of June each year, 000 omitted)

	1914	1919	1922
National	$ 74,506	$100,541	$111,030
State	87,628	*	179,347
Total	$162,134		$290,377
	1923	**1925**	**1927**
National	$116,346	$113,011	$123,444
State	184,120	*	210,016
Total	$300,466		$333,460

24 *Emergency Banking and Bank Conservation Act,* Title III, Section 304.
25 Compiled from the Report of the Comptroller of the Currency, 1933.
* Corresponding data for state banks not available.

	1928	1929	1930
National	$139,795	$129,251	$137,036
State	251,695	292,179	293,328
Total	$391,490	$421,430	$430,364
	1931	1932	1933
National	$117,375	$120,303	$ 84,709
State	276,772	203,262	89,182
Total	$394,047	$323,564	$173,891

*Data not available; 1914 data for state banks estimated.

Table 8.

PERCENT: NATIONAL AND STATE BANK SURPLUS OF TOTAL SURPLUS

SEVENTH FEDERAL RESERVE DISTRICT

N—National S—State

	1922		1923		1927	
	N	S	N	S	N	S
Illinois	41.9	58.1	44.0	56.0	37.7	63.3
Indiana	45.9	54.1	42.9	57.1	38.0	62.0
Iowa	37.3	62.7	32.1	67.9	36.4	63.6
Michigan	13.6	86.4	23.3	76.6	20.2	79.8
Wisconsin	49.2	50.8	52.7	47.3	51.0	49.0
	1928		1929		1930	
	N	S	N	S	N	S
Illinois	40.7	59.3	28.7	71.3	30.1	69.9
Indiana	38.6	61.4	40.1	59.9	43.1	56.9
Iowa	35.1	64.9	35.1	64.8	33.4	66.6
Michigan	23.4	76.6	24.1	75.9	23.8	76.2
Wisconsin	43.5	56.4	51.6	48.4	51.2	48.8
	1931		1932		1933	
	N	S	N	S	N	S
Illinois	21.7	72.3	26.9	73.1	59.4	40.6
Indiana	41.8	58.2	41.9	58.1	19.4	70.6
Iowa	32.3	67.7	45.7	64.3	32.4	67.6
Michigan	25.3	74.7	52.5	47.5	35.2	64.8
Wisconsin	49.6	50.4	50.3	49.7	52.1	47.9

DEPOSITS

Following the same general trend as capital, surplus and undivided profits, from 1922 to 1932, deposits also were held in greater amounts by state banks than by national banks in the Seventh District. Only in 1933 was the situation reversed. Iowa and Indiana were the only states to show consistently higher state bank deposits from 1922 through 1933. In the single year, 1932, Michigan national banks held over 50% of deposits in that state. In 1933 Illinois national banks increased their percentage of deposits to 74.1 from the 1932 figure of 32.3%. The balance of deposits between national and state banks in Wisconsin was comparatively even.

Table 9.

NATIONAL AND STATE BANK DEPOSITS
SEVENTH FEDERAL RESERVE DISTRICT

(As of June each year, 000 omitted)

N—National S—State

	1914	1919	1922
National	$1,182,071	$2,195,953	$2,076,568
State	1,704,446	*	3,483,225
Total	$2,886,517		$5,559,793

	1923	1925	1927
National	$2,222,968	$2,653,714	$2,732,143
State	4,104,975	*	5,727,605
Total	$6,327,943		$8,459,748

	1928	1929	1930
National	$2,977,134	$2,639,936	$2,747,246
State	5,092,729	4,185,566	7,814,223
Total	$8,069,863	$6,825,502	$10,561,469

	1931	1932	1933
National	$2,563,743	$2,147,690	$2,237,168
State	7,030,760	3,278,458	1,698,271
Total	$9,594,503	$5,880,117	$4,194,460

*Data not available; 1914 state bank data estimated.

Table 10.

PERCENT: NATIONAL AND STATE BANK DEPOSITS OF ALL DEPOSITS

SEVENTH FEDERAL RESERVE DISTRICT

N—National S—State

	1922		1923		1927	
	N	S	N	S	N	S
Illinois	42.9	57.1	41.0	59.0	38.6	61.4
Indiana	39.9	60.0	38.5	61.5	40.0	60.0
Iowa	33.1	66.9	24.3	75.7	35.2	64.8
Michigan	25.1	74.9	24.0	76.0	22.9	77.1
Wisconsin	41.0	59.0	40.7	59.3	51.7	48.3

	1928		1929		1930	
	N	S	N	S	N	S
Illinois	41.5	58.5	30.6	69.4	33.6	66.4
Indiana	40.7	59.3	41.9	58.1	45.7	54.3
Iowa	35.2	64.8	41.9	64.3	35.6	64.4
Michigan	24.3	75.7	41.2	58.8	31.4	68.6
Wisconsin	42.8	57.2	46.0	54.0	48.5	51.5

	1931		1932		1933	
	N	S	N	S	N	S
Illinois	35.2	64.8	32.3	67.7	74.1	25.1
Indiana	49.6	50.4	47.4	52.6	37.7	62.3
Iowa	35.8	64.2	39.0	61.0	36.0	64.0
Michigan	27.2	72.8	58.0	42.0	43.5	56.5
Wisconsin	50.8	49.2	52.0	48.0	51.1	48.9

LOANS AND DISCOUNTS

State banks from 1928 to 1932 had the larger share of loans and discounts made by all state and national banks in the Seventh District. In 1928 and 1929, state banks had respectively 65% and 69.3% of the total; in 1931 and 1932 the relative importance of state banks became less and finally in 1933 national banks made more loans than did state banks.

Table 11.

LOANS AND DISCOUNTS: NATIONAL AND STATE BANKS
SEVENTH FEDERAL RESERVE DISTRICT

(As of June each year, 000 omitted)

	1919	1922	1923
National	$1,672,572*	$1,759,728*	$1,638,824*
State	**	**	**
Total			
	1925	**1927**	**1928**
National	$1,634,041*	$1,805,597*	$2,025,028*
State	**	**	3,744,497
Total			$5,769,525
	1929	**1930**	**1931**
National	$1,855,940	$1,856,079	$1,508,437
State	4,192,350	3,932,747	3,132,537
Total	$6,048,290	$5,788,826	$4,640,974
		1932	**1933**
National		$1,232,174	$1,023,092
State		1,990,779	965,709
Total		$3,222,953	$1,988,801

*From the Reports of the Comptroller of Currency: 1919, 1922, 1923, 1925 and 1927.

**Data not available.

An analysis by states of state and national bank loans and discounts shows that in Iowa and Michigan, state banks made the bulk of loans and discounts from 1922 to 1933. This was also the case in Indiana in the period 1928 to 1933. In Wisconsin, state banks made, on the average, slightly more than one-half the total loans and discounts of member banks in that state, and in Illinois, state banks also led this field until 1933 when their percentage fell to 29.3% of the total loans and discounts.

Table 12.

PERCENT: NATIONAL AND STATE BANK LOANS AND DISCOUNTS OF TOTAL LOANS AND DISCOUNTS SEVENTH FEDERAL RESERVE DISTRICT

	1922		1923		1927	
	N	S	N	S	N	S
Illinois	42.8	57.2	40.5	59.4	38.4	61.6
Indiana	*	*	*	*	*	*
Iowa	29.7	70.3	24.0	76.0	28.3	71.7
Michigan	25.1	74.9	24.1	75.9	21.1	71.9
Wisconsin	*	*	41.4	58.6	48.4	51.6

	1928		1929		1930	
	N	S	N	S	N	S
Illinois	41.3	58.7	30.2	69.8	32.8	67.2
Indiana	36.2	63.8	37.2	62.8	41.1	58.9
Iowa	27.3	72.9	27.6	73.3	26.5	73.5
Michigan	26.0	74.0	23.5	76.5	23.7	76.3
Wisconsin	41.7	58.3	47.8	52.2	48.4	51.6

	1931		1932		1933	
	N	S	N	S	N	S
Illinois	32.8	67.2	29.2	70.8	70.7	29.3
Indiana	45.2	54.8	43.9	56.1	29.0	71.0
Iowa	24.7	75.3	25.7	74.3	20.5	79.5
Michigan	56.3	43.7	25.0	75.0	37.5	62.5
Wisconsin	48.9	51.1	50.0	50.0	45.3	54.7

*Data not available.

TOTAL RESOURCES

Iowa and Indiana had the bulk of total resources in state banks each year from 1922 to 1933. State banks in Illinois also held the larger share of resources until 1933 when national banks had as high as 70% of the total. Predominance of state banks as to resources prevailed in Michigan for all years excecpt 1932, and in Wisconsin for all years except 1931 and 1932. In Wisconsin, total resources were divided equally between state and national banks in 1933.

Table 13.

TOTAL RESOURCES: NATIONAL AND ALL STATE BANKS
SEVENTH FEDERAL RESERVE DISTRICT

(As of June each year, 000 omitted)

	1914	1919	1922
National	$1,525,953	$2,956,524	$2,692,408
State	2,055,448*	**	5,299,083
Total	$3,581,401		$7,991,491

	1923	1925	1927
National	$2,776,422	$2,905,837	$3,265,640
State	4,917,571	**	6,072,734
Total	$7,693,993		$9,338,374

	1928	1929	1930
National	$2,610,901	$3,226,918	$3,317,234
State	6,225,804	6,796,778	6,469,739
Total	$9,836,705	$10,023,695	$9,786,973

	1931	1932	1933
National	$3,070,640	$2,618,434	$2,667,474
State	5,678,814	3,800,284	2,102,229
Total	$8,749,454	$6,418,718	$4,769,707

*Estimated.
**Data not available.

Table 14.

PERCENT: NATIONAL AND STATE BANK RESOURCES
OF TOTAL RESOURCES
SEVENTH FEDERAL RESERVE DISTRICT

	1922		1923		1927	
	N	S	N	S	N	S
Illinois	30.0	70.0	41.7	58.3	38.0	62.0
Indiana	39.8	60.2	37.7	62.3	34.0	66.0
Iowa	33.8	66.2	23.0	77.0	36.0	64.0
Michigan	24.8	75.2	26.6	73.4	22.6	77.4
Wisconsin	42.3	57.7	39.4	57.6	43.0	57.0

	1928		1929		1930	
	N	S	N	S	N	S
Illinois	41.8	58.2	30.8	69.2	33.6	66.4
Indiana	36.0	64.0	37.7	63.2	39.0	61.0
Iowa	35.9	64.1	36.6	63.4	36.0	64.0
Michigan	24.4	75.6	24.7	75.3	25.0	75.0
Wisconsin	43.6	56.4	47.6	52.4	49.0	51.0
	1931		1932		1933	
	N	S	N	S	N	S
Illinois	34.0	66.0	30.0	70.0	70.0	30.0
Indiana	42.0	58.0	39.9	60.1	30.0	70.0
Iowa	36.0	64.0	36.8	61.2	35.3	64.7
Michigan	26.9	73.1	55.3	44.7	41.1	58.9
Wisconsin	50.9	49.1	51.5	48.5	50.0	50.0

COMMERCIAL BANKING STRUCTURE AND BANK FAILURES

From 1914 to 1921, bank failures in the Seventh District were practically negligible; but after that period, the number of failures per year tended to increase, reachcing a peak in 1933. In general, larger number of state banks failed than national banks, involving in their failure greater amounts of capital and deposits.

Table 15.

PERCENT: FAILED NATIONAL AND STATE BANKS, OF NATIONAL AND ALL STATE BANKS
SEVENTH FEDERAL RESERVE DISTRICT

Number	1922	1923	1927	1928	1929	1930	1931	1932	1933
National	.1	.1	2.5	1.3	1.3	3.1	8.6	11.6	32.1
State	.5	1.2	2.5	2.1	2.1	6.6	17.0	16.1	25.0
Total	.4	1.02	2.5	1.8	1.7	5.7	15.4	15.2	30.7
Capital	1922	1923	1927	1928	1929	1930	1931	1932	1933
National	.5	.1	.7	.4	.4	1.4	5.1	8.2	*
State	.2	.5	1.2	.7	.9	3.9	15.2	8.2	*
Total	.2	.3	1.0	.6	.8	2.4	11.6	10.2	*
Deposits	1922	1923	1927	1928	1929	1930	1931	1932	1933
National	.3	.1	.7	.2	.2	.8	3.1	2.8	10.0
State	.08	.15	.1	.2	1.1	1.0	5.1	5.9	12.0
Total	.1	.2	.5	.2	1.1	1.1	4.4	4.5	11.0

*Data not available.

CONCLUSIONS RELATING TO COMMERCIAL BANKING STRUCTURE OF SEVENTH DISTRICT.

On the whole from the organization of the Federal Reserve System until 1933, state banks were the predominate factor in Seventh District Banking structure, with the exception that during 1933 the functioning of national banks became more important than that of state banks although the latter still existed in greater numbers. If the large Chicago banks were removed from the picture, state banks would show continuous dominance in the Seventh District.

Iowa and Indiana have remained throughout the period the stronghold of state banks; in Illinois and Wisconsin, national banks have been relatively the more important. In Michigan before 1931, national banks controlled a bare 25% of the resources; during 1931 and 1932 national banks controlled approximately 50% of total Michigan resources; but in 1933 their percentage again dropped giving state banks the predominate position in the commercial banking field of Michigan. This situation in 1933 resulted from the failure of the large Detroit banks which had converted from state to national banks in 1931.

TERMS OF CREDIT PRACTISE.

Since the organization of the Federal Reserve System, there have been four perods of change in credit practise in the Middle West; 1914 to 1922, 1922 to 1925, 1925 to 1929, and 1929 to 1933.

In the first period, 1914 to 1922, manufacturing and agriculture relied upon long established banking relationships for credit; manufacturers and merchants depended upon credit lines with commercial banks for their short-term credit and generally obtained capital funds by the sale of bonds and other long-term securities either to individual investors or to various special institutions such as universities and insurance companies. Agriculture during this period generally obtained its credit from country state banks which were not meticulous as to the period of a loan providing the security were sufficient. National banks, which, until the passage of the Federal Reserve Act had been prohibited from making real estate loans, were permitted to do so within certain limits set by that Act, but not until 1927 were the restrictions of Section 3137 of the National Banking Act greatly modified. After 1927, the Federal Land Banks enabled farmers to obtain their needed credit from a government organized source and after this time, agriculture relied less on credit provided by either state or national banks. Finally, in the financing of urban real estate, whereas credit for improvements had previously been furnished by commercial banks, during this period, Building and Loan Associations began to take over this function.

However, these credit practises were not permanent and further changes became noticeable after 1922. In that year the Federal Reserve System relaxed restrictions on the use of acceptances by member banks and changed the rules of eligibility regarding acceptances.[26] With this relaxing of restrictions, financing by foreign or domestic acceptances, a practise which had developed during the World War, became quite popular. Between 1933 and 1925 the amount of financing accomplished by this method increased many times.[27] (See Chapter X). Loans made by Federal Land Banks increased 660% by 1925[28] and in the same period, assets of Building and Loan Associations in the states which compose the Seventh District, increased 46%. Although business activity increased almost 120% during these three years[29] commercial bank credit in the Seventh District increased only 100% in the same period.[30]

This period, then, evidenced a marked change in the relationship between commercial banks and short term commercial credit, as manufacturers and merchants began to depend less on the lines of credit utilized during the privious period and more on the acceptance market for their current financing. The period also showed further movement of real estate loans away from commercial banks, the farmer turning to the Land Bank and the urban property owner to the Building and Loan Association.

During the next period, 1925 to 1929, the tendency of diminishing dependence upon commercial banks was further accentuated, but with some important variations. One of these was the relative decline in importance of acceptances, in spite of their actual increased amount, because of a new activity in stock issues as a means of financing. This situation is evidenced by a 50% increase in amount of Seventh District Acceptances[31] and a 370% increase in Seventh District stock issues.[32] The comparable figure for increase in commercial bank credit was 19%[33] Evidently manufacturing and commercial concerns in the Middle West were using stock issues, which involved no set interest payments, to replace partially acceptances which in their turn had previously replaced the bank line as a source of credit This development may account, in part, for the growth of Mid-Western investment houses. Since the

---

26 *Federal Reserve Bulletin* 1922, p. 433.
27 Reports of American Acceptance Council 1924 and 1925; exact data not available.
29 Compiled from reports of the Comptroller of Currency 1922 and 1925.
28 Compiled from data provided by Federal Land Banks of Omaha, Louisville, St. Paul and St. Louis.
30 Computed from *Federal Reserve Bulletin*, 1922 and 1925.
31 Computed from reports of American Acceptance Council, 1925 and 1929.
32 Computed from the *Commercial and Financial Chronicle*, 1925 and 1929.
33 Computed from *Federal Reserve Bulletin*, 1925 and 1925, Data for Leading Cities.

public was apparently prosperous and in a buying mood, such a utilization of stock issues was possible.

What was taking place in the small country bank during this period? Due to the demand of national banks, the McFadden-Pepper Act had been passed, removing many restrictions on real estate loans so that national banks might be in better position to meet the competition of state bank competitors However, real estate loans so far as country banks were concerned, were becoming less important. The banking departments of several mid-Western states looked with disfavor on such loans and urged that banks establish a "Secondary Reserve" of "Good" industrial bonds. Many country commercial banks were thus put in the position of having to absorb the increased security issues of the period and provide capital funds for industrial enterprises about which the country banker knew nothing. Whereas in 1921 country banks had held 19% of all the railroad and public utility bonds held by all banks and 24% of "other stocks and bonds," they held in 1930 as a result of this policy, 19% of railroad and public utility bonds and 33% of "other stocks and bonds."[34]

As industrial bond holdings increased, rural banks experienced diminishing business in other fields: Their real estate loans were being lost to the Middle WWestern Federal Land Banks, whose loans increased 126%,[35] between 1925 and 1929, and to Building and Loan Associations whose assets increased 88%[36] during the same period; the non real estate loans of country banks were being lost to "finance companies" which handled small personal loans and which were gaining in number and resources during this period. The consequent losses in country bank revenues from these sources further encouraged the tendency towards investment of capital in long term industrial securities, among which, because of lack of information and training, the average country banker is incompetent to judge.

In short, as the period of prosperity drew to its close in 1929, both the large city bank and the small country bank were meeting severe competition. The principal industries of the Seventh District were not so dependent as formerly upon commercial banks for credit, but were securing their financing from other sources either by the sale of short and long term securities or by borrowing from other agencies.

34 Willis, H. P., and Chapman, J. R., "*The Banking Situation*, p. 540.

35 Computed from data provided by the Federal Land Banks of Louisville, Omaha, St. Paul and St. Louis.

36 Computed from the Annual Reports of the Comptroller of Currency, 1925 and 1929.

In the period 1929 to 1933, another marked change occurred in the credit practise of the Seventh District, taking the form of a return to methods of financing used before the war period. The acceptance market practically disappeared, by 1933, the volume of acceptances had fallen to the vanishing point,[37] in the Seventh District. Stock issues had declined approximately 95%.[38] Manufacturers and merchants attempted to re-establish their former lines of credit with banks, where they were welcomed, provided their enterprises gave sufficient securities and were financially sound. Although the public opinion prevailed that at this time Seventh District banks deliberately refused credit, this was not true except in those cases where credit demands were judged to be unsound or where insufficient security was offered. Contrary to public opinion, bankers in 1933 were requiring no more security for commercial loans than formerly.[39]

The return of business to city commercial banks after 1929 was not paralleled in the case of country banks. Middle Western Land Banks increased their loans another 50% between 1929 and 1933; Building and Loan Associations retained most of the business gained in previous years; "personal loan" or "finance" companies continued to increase in number and resources.[40] Rural banking suffered in accordance with these developments.

CONCLUSION

The changes in credit practise in the Middle West since 1914 may be divided into two classes, those which affect the city bank and those which affect the country bank. In the former class, the first change was marked movement away from dependence on credit lines toward financing by use of acceptances. This was followed by another shift by which financing by acceptances lost popularity in favor of financing by stock issues. Since 1929 there has been a return to dependence on credit lines at the commercial bank.

Changing credit practise has had less fortunate effects on the country bank. Whereas existing practise is restoring city bank business, the changes affecting country banks seem to have become permanently established. There is no indication that country banks are regaining any of the business they lost to the Land Banks, to Building and Loan Associations or to the more recently

---

37 Computed from Reports of American Acceptance Council, 1929 and 1933.

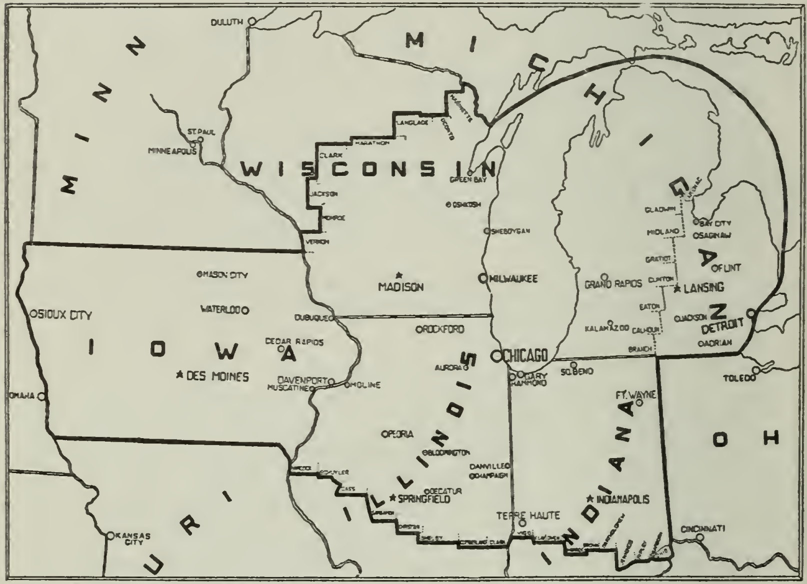
38 Computed from *Commercial and Financial Chronicle*, 1929 and 1933.

39 Interviews with Federal Reserve officials of the Reserve Banks of Chicago and St. Louis.

40 It is reliably stated by an outstanding economist that one "finance" company in a small Illinois city of 30,000 was loaning more money than all the commercial banks of that city combined.

established "finance" campanies. In order to make even running expenses in these circumstances, the country banker must provide capital either for industries or for the Government by purchasing bonds or long term securities.[41-42]

Territory Comprising the Seventh Federal Reserve District



DOTTED COUNTY LINES IN MICHIGAN INDICATE THE BOUNDARIES OF THE DETROIT BRANCH TERRITORY

Federal Reserve City—Chicago **Federal Reserve Branch City—Detroit**

41 This trend is unfortunate; it was the decline in bond portfolios between 1929 and 1933 which caused the failure of most of those country banks which closed their doors. This conclusion is held also by Mr. C. S. Young, of the Federal Reserve Bank of Chicago; Mr. C. L. Stewart of the Federal Reserve Bank of St. Louis; and Mr. Bert L. Chapman, Bank Examiner of the State of Illinois.

42 Although the conclusions in this section were derived from data not alto- Section Two of the Federal Reserve Act, Chicago had been used to illustrate the method of naming the banks.
gether comparable, no truly comparable data being available, they have been verified in interviews with several Seventh District bankers of long experience as well as in interviews with officials of the Federal Reserve Banks of Chicago and St. Louis.

CHAPTER III.

ESTABLISHMENT OF THE FEDERAL RESERVE BANK OF CHICAGO

In spite of opposition, the Glass Bill passed both houses of Congress, was approved by President Wilson and became a law on November 23, 1913.[1] With the passage of the Federal Reserve Act, the bankers immediately turned their attention to the problem of districting. Every city of any size desired to be the location of a Federal Reserve Bank and among those large cities which were practically assured of a Reserve Bank, competition for territory to be included with their respective districts became the pressing problem. As a result of these various interests, the work of the Organization Committee was rendered most difficult.

Before beginning the task of determining the number and boundaries of the various districts, the Organization Committee set up a Preliminary Committee of Organization which was to formulate principles to guide the Organization Committee in choosing locations for the regional banks privided for in the Act and in determining the boundaries of the districts. This Preliminary Committee was composed of a group of banking experts headed by Dr. H. Parker Willis.[2] After careful consideration the Committee recommended that districts be outlined according to the following principles:

(1) The number of banks was to be between eight and twelve;

(2) The institutions should be large enough to stand alone;

(3) The institutions should be similar in size as far as practicable;

(4) The creation of any one large bank should be avoided;

(5) The minimum capital was to be four million dollars, although if it were thought best to go below this minimum the public could furnish the rest of the money;

(6) In establishing the headquarters banks, facility and speed of transportation should be considered;

(7) State lines should be considered in forming the districts.[3]

The Organization Committee was urged when considering these principles to remember that business trends follow a northerly and easterly direction and that a district formed on these lines would enable the headquarters bank to give the fullest possble scope to existing habits and methods of business. Attention to the matter of lending and borrowing areas would not be possible in the cases of

1 Willis, H. P., *"The Federal Reserve,"* p. 57.
2 *Confidential Report No. 243*, U. S. Government Printing Office.
3 Ibid., p. 12.

New York and Chicago, but nevertheless an attempt should be made to eliminate the interdependence of districts.[4]

The Preliminary Committee also pointed out that Chicago and New York were practically predetermined as sites for Federal Reserve Banks.[5] Since Chicago bankers did not find it necessary to concern themselves with persuading the Committee that a Reserve Bank should be placed in their city, they could devote their energies to obtaining as large a district as possible.

ORGANIZING THE SEVENTH DISTRICT.

Mr. J. B. Forgan, President of the First National Bank of Chicago submitted to the Organization Committee three plans for a Chicago district.[6] The first of these gave the Chicacgo district a large part of the United States under an eight district organization.[7] The second plan provided nine districts in which it was proposed that the Chicago district be made smaller but still remain largest in number of bank members and in area, and second largest in banking resources.[8] In case more than nine banks were thought to be desirable, a third plan provided for a further reduction in area of the Chicago district, but the maintenance of its second position in size as compared to the other districts.[9]

Table 16.

FIRST NATIONAL BANK OF CHICAGO

District	Number of Banks	Capital (Thous.)	Minimum Deposit (Thous.)	Maximum Deposit (Thous.)
Boston	411	9,004	25,926	42,409
New York	651	23,457	101,582	171,367
Philadelphia	1,057	18,237	55,911	91,457
Washington	438	5,875	14,643	23,766
Atlanta	454	5,536	10,685	17,197
Chicago	2,574	25,693	98,703	162,630
St. Louis	1,398	11,468	33,909	55,838
San Francisco	519	7,811	33,909	55,838

4 Ibid., pp. 13 and 14.

5 This fact, so far as Chicago was concerned, was admitted inasmuch as in Section Two of the Federal Reserve Act, Chicago had been used to illustrate the method of naming the banks.

5 Data from maps and accompanying tables in the Library of the Federal Reserve Board, Washington, D. C.

7 The whole of the states of Kentucky, Indiana, Michigan, Wisconsin, Wyoming and Colorado were included and approximately three-fourths of Ohio and Illinois.

8 In this case three-fourths of Kentucky, the southern portion of Indiana and approximately one-half of Ohio were relinquished to other districts.

9 Under the third plan, in addition to that territory relinquished under the second plan, the entire state of Colorado would be placed in another district.

10 From a table accompanying a map in the Library of the Federal Reserve Board, Washington, D. C.

DISTRICTING PLAN NO. 1

In support of these plans, Mr. Forgan presented to the Organization Committee a map illustrating the direction and the estimated amounts of trade between Chicago and various parts of the United States. This map, based on products handled by the Chicago Board of Trade,[11] showed that all states in the Union carried on considerable trade with Chicago with the exception of the following states: Connecticut, Florida, Georgia, Idaho, Nevada, North Carolina, Oregon, Rhode Island, South Carolina, Utah and Washington.

The plans presented by the First National Bank of Chicago were not the only ones received by the Organization Committee. Each state and every important city either evidenced a desire for a Reserve Bank or requested some special concession regarding the district in which it would be developed. As a result of this attitude, many contests for territory developed.

CONTESTS FOR TERRITORY.

Contests soon developed between Chicago and other cities concerning regions which did not obviously belong to a specific reserve district. In order to convince the Organization Committee that certain sections should be associated with certain banks of districts, various devices were used with the intent to show how public opinion favored a certain bank or how the economic interest of the community in question could be served only by its being in a particular district.

One of the earliest contests developed in Illinois because both St. Louis and Chicago desired a large part of that state. The Chicago Clearing House Association sent out a blank to each bank in the state asking for its preference of location in a Federal Reserve District. These blanks were mailed from Chicago the latter part of 1913 and were to be signed and returned to the Clearing House Association. St. Louis followed a similar plan a short time later. Of the 400 replies received by the Chicago Clearing House Association, 61 banks expressed a preference for St. Louis. 311 replies were received in St. Louis, of whicch 116 expressed a preference for Chicago. The most general reason given for preference in either case was that business of that particular section naturally tended to move toward the city preferred. A few banks were indifferent. Some objected to St. Louis because of high exchange charges. The decision of the Organization Committee in dividing the state of Illinois followed closely the lines indicated by these questionnaires.[12].

---

[11] From a map in the Library of the Federal Reserve Board, Washington, D. C.
[12] These blanks are preserved in the Library of the Federal Reserve Board, Washington.

In Indiana the Bankers Association took a hand in the proceedings and sent questionnaires asking for information about the amount of reserves carried by Indiana banks in various cities, i.e., Chicago, St. Louis, New York. Indianapolis and Louisville. This action was motivated by the hope that a Reserve Bank might be located in Indianapolis, but if this were impossible, the bankers would at least know what district was preferred. The questionnaire showed that Chicago carried most of the reserves; in fact, most of the state of Indiana wished to be placed in the Chicago district. Evansville, the most important city in southern Indiana, was emphatic in expressing this desire and on January 21, 1914 sent a telegram to Secretary McAdoo asking that it be placed in the Chicago district and pointing out that it would be very detrimental to Evansville to be placed in any other district since such a relatonship would not follow the natural course of business.[13]

One of the bitterest disputes concerning districting arose in northern Missouri. Apparently several banks in this section were fearful of being placed in the Chicago district. A letter vigorously stating their objections to being included in the Chicago district was sent to the Organization Committee. Oddly enough, this letter was written on stationery of the Park Department of the City of Kansas City. This fact and the fact that the letter not only objected to the Chicago district but also asked support for Kansas City as a Reserve Bank center, indicated that St. Louis and Chicago were not the only ones interested in what happened in northern Missouri.[14]

The letter which apparently originated in the Kansas City Park Department was followed on January 17, by one from the Commonwealth Bank of St. Joseph, Missouri. This bank was evidently representing the Chicago influence since its letter requested that all banks north of the tracks of the Chicago, Burlington and Quincy Railroad be placed in the Chicago District, claiming that 147 banking towns in this locality desired Chicago in preference to St. Louis and Kansas City. Immediately another bank in St. Joseph, the First National, made a statement that the northern Missouri banks had made no formal request but had merely expressed an opinion and that the Commonwealth Bank had not spoken with authority.[15] In the end, 40 banks in northern Missouri on January 22, 1914, petitioned the Organization committee to be placed in the Chicago district.[16]

During the latter part of January, the banks of the state of Iowa became active also in behalf of the Chiccago district. Omaha

13 From material in the Library of the Federal Reserve Board.
14 Idem.
15 Idem.
16 Idem.

hoped to be the site of a regional bank, in which case it would want part of Iowa in its district. Although there was no vigorous contest between Omaha and Chicago over the state, a petition evidencing Iowa's preference for Chicago and bearing the bankers' signatures from 30 Iowa cities, was placed in the hands of the Organization Committee. In support of the petition, data was attached regarding railroad freight and passenger service between Chicago, St. Paul, Kansas City and St. Louis which showed that the railroads having the most mileage in Iowa carried most of their freight and passengers to Chicago.[17]

In order to show that even the most remote parts of the state of Iowa wished to be included in the Chicago district, another petition was submitted from the banks of Lyons county, in the northwestern part of the state, asking that this portion also be included in the Chicago district.[18]

During the months of January and February, 1914, Michigan likewise was active in presenting its case before the Organization Committee. On January 20, the First National Bank of Detroit submitted data to the Committee showing the close connection between Chicago and Detroit. According to this statement, 32% of the items handled by Detroit banks went to Chicago and 34% to New York. Only 6% of Detroit business was with Cleveland and only 2% with Cincinnati.[19] Northern Michigan banks also expressed their desire to be associated with Chicago. Letters and telegrams were sent, particularly by upper peninsula banks, showing their close relation with Chicago.

A few requests came from banks far distant from Chicago asking to be included in the Chicago district; these communications came from Montana, South Dakota and Nebraska.[20]

VOTE FOR FEDERAL RESERVE DISTRICTS.

In order to allow the banks of the country to have a voice in determining their inclusion in a reserve district, the Organization Committee conducted two polls, one to get the bankers' viewpoint regarding appropriate reserve cities and the second to determine those cities to which the various banks would choose to be attached. If the opinion of middle western bankers on the first pool had been put into practise, the twelve reserve banks would have been located at New York, Chicago, St. Louis, San Francisco,

17 Idem.

18 Idem.

19 Idem.

20 Senator Myers of Montana favored the inclusion of his state in the Chicago District.

New Orleans, Denver, Atlanta, Minneapolis. Kansas City. Cincinnati, Philadelphia and Seattle. This plan would have placed more banks in the west and middle west than now exist.[21] The advisability of placing a bank at both Kansas City and Denver was open to question because of the difficulty of securing capital, but at least the suggestion of middle western bankers would have provided for a more equable distribution of banks between the East and West coasts than now exists.

The second ballot which was to determine the city to which each commercial bank wished to be attached, gave Chicago 906 votes as a Reserve Bank city. The majority of these votes came from the states nearest Chicago: Illinois, Indiana, Iowa, Michigan and Wisconsin. South Dakota turned a large percentage of votes for Chicago and the remainder came from every section of the Union. As second choice, Chicago received large votes from Nebraska. Kansas and South Dakota.[22]

This poll proved the falsity of the contentions held by a few banks in Missouri and farther west that the majority of institutions in that territory wished to come into the Chicago district. The 147 banks which, according to one St. Joseph bank, were anxious to be assigned to Chicago, failed to cast their vote in a manner calculated to obtain this end; only four banks in that territory voted for Chicago.[23] Chicago received very few votes from the states farther west, with the exception of a substantial vote from South Dakota, and it appears that the previous western interest in Chicago had been superficially aroused by agitation from Chicago.

If the votes of only those banks which were eventually included in the Seventh District are considered, it will be found that of 861 banks voting, 714 voted for Chicago; the remainder of the votes were scattered between other middle western cities, Cincinnati, Detroit, Omaha, Indianapolis, Sioux City, Cedar Rapids and Milwaukee. Chicago had no serious rival as a Reserve Bank center.[24]

THE DECISION.

The Organization Committee rendered its decision on April 2, 1914, supposedly based on the principles and opinions set forth above.

21 Letter from the Federal Reserve Organization Committee transmitting Briefs and Arguments Presented to the Organization Committee Relative to the Location of Reserve Banks in the United States: 63d Congress, 2nd Session, Document No. 485, p. 356.

22 Ibid., p. 342.

23 Ibid., p. 356.

24 Decision of the Districting Committee.

Table 17.

VOTE OF SEVENTH FEDERAL RESERVE DISTRICT BANKS ON PREFERENCE FOR RESERVE CITY.

City	Iowa	Sou. Wis.	Nor. Ill.	Nor. Ind.	Mich.	Total
Chicago	256	36	274	105	43	714
Cincinnati	----	----	----	50	----	50
Detroit	----	----	----	----	22	22
Des Moines	17	----	----	----	----	17
Omaha	17	----	----	----	----	17
Indianapolis	----	----	----	14	----	14
St. Louis	----	----	9	1	----	10
Sioux City	5	----	----	----	----	5
Cedar Rapids	5	----	----	----	----	5
Milwaukee	4	----	----	----	----	4
Clinton, Iowa	1	----	----	----	----	1
Chicago or St. Louis	1	----	----	----	----	1
Twin Cities	1	----	----	----	----	1

Table 18.

THE TWELVE FEDERAL RESERVE BANKS FORMED BY THE ORGANIZATION COMMITTEE

City	Number of Banks	Capital and Surplus	Deposits
Boston	445	$ 9,924,543	$ 631,358,774
New York	478	20,787,608	2,061,958,059
Philadelphia	757	12,500,738	937,181,166
Cleveland	767	12,007,384	851,157,633
Richmond	475	6,542,713	399,579,841
Atlanta	382	4,702,558	262,318,818
Chicago	952	12,967,701	1,265,208,464
St. Louis	469	6,367,006	378,858,307
Minneapolis	687	4,702,925	475,684,697
Kansas City	839	5,600,977	521,318,350
Dallas	737	5,653,924	307,130,350
San Francisco	529	8,115,494	573,243,051

The Chicago district had included within its boundaries the entire state of Iowa, the southern peninsula of Michigan, and parts

of Illinois, Indiana and Wisconsin,[25] an area of 171,306 square miles.

Two areas. northern Michigan and southern Indiana. in which banks had expressed a strong desire to be included within the boundaries of the Chicago district, were not so included. The same situation existed in regard to the far western banks which had desired to be connected with Chicago. The southern Indiana banks remained satisfied with the St. Louis district.[26] but the western banks in Wyoming and Nebraska and some of those in northern Michigan were not satisfied with the arrangement and soon petitioned to be shifted to the Seventh District.

PETITION OF WYOMING AND NEBRASKA BANKS

Shortly after the opening of the Reserve Banks, certain banks in Wyoming and Nebraska petitioned the Federal Reserve Board that they be transferred from the Kansas City to the Chicago district, on the grounds that Section Two of the Federal Reserve Act had been violated.[27] Their reason for requesting a change was the inconvenience of a forced relationship with Kansas City when the bulk of their business was with Chicago. Proof of this situation was offered indicating that the petitioning banks had more correspondents in Chicago than in Kansas City and that 87.1% of the freight originating in the petitioners' territories went to Chicago through Omaha.[28]

The Kansas City Bank contended that there was no economic justification for the change. The usual method of marketing was through small dealers in Denver, Lincoln or Omaha and consequently so far as the producer was concerned, the products were disposed of within the Kansas City district; further, the industrial activity in the petitoners' territories was not different from that in the rest of the district, the business of both Omaha and Kansas City being built on the agriculture of the states of Kansas, Nebraska and Wyoming, and the mere existence of reserve district lines could not make the marketing of products more difficult in one section than in another.[29] On these grounds, the defense maintained

---

25 Illinois, north of the southern line of the counties of Hancock, Schuyler, Cass, Sangamon, Christian, Shelby, Cumberland and Clark;
Indiana, north of the southern boundaries of the counties of Vigo, Clay, Owen, Monroe, Brown, Bartholomew, Jennings, Riply, and Ohio;
Wisconsin, south of the Northern boundaries of the counties of Vernon, Sauk, Columbia, Dodge, Door, Washington and Ozaukee. See Appendix A.

26 This section of Indiana is well provided with rail connections to St. Louis by the Baltimore & Ohio, the Southern Railway and the Louisville & Nashville Railroads.

27 Section Two states that the Federal Reserve Districts shall be formed with due regard to the convenient and customary course of business.

28 Before the Federal Reserve Board: In the matter of Petition of Certain Banks in Wyoming and Nebraska to be transferred from Federal Reserve District 10 to Federal Reserve District 7; Brief of Petitioners—Seriatim.

29 The defense maintained, and was upheld by the Board, that the evidence presented by the petitioners was new and, under the act, could not be accepted. The defense also showed that the data presented by the petitioners had been biased by incorrect sampling and wrong interpretation to serve the interest of the petitioners. Before the Federal Reserve Board: op. cit. p. 13.

there was no need for the petitioning banks to be shifted from one district to another.

After thorough consideration of the evidence and the votes of the petitioning banks for their choice of reserve cities, the Board rendered its decision in favor of the Kansas City Bank and refused to make the petitioned transfer.[30]

The problem of facilitating the movement of products through Omaha to Chicago was solved by placing a branch of the Kansas City Bank at Omaha. Since this arrangement was made, there has been little complaint.

THE WISCONSIN DISPUTE.

The only other discussion of boundaries which has concerned the Chicago district was occasioned by the petition of certain northern Wisconsin banks to be transferred from the Minneapolis to the Chicago district. This petition, signed by 53 banks, was presented to the Board on May 1, 1915.[31] In view of the evident original desire of some of these banks to be placed in the Seventh District at the time of its organization, their subsequent dissatisfaction and petition was to be expected. They contended that their territories had been placed in the Minneapolis district without due regard to the convenient and customary course of business, that their customary trend of business was to Chicago, that the petitioning counties were near Chicago and that Chicago was an old established center of business for northern peninsula banks. The petitioners also complained that the necessity for maintaining two reserves, the one which was required in Minneapolis and another which was necessary to meet the needs in Chicago, was reducing their ability to make loans and lowering their earning power.[32]

The counsel of the Minneapolis Bank offered no refutation of these contentions but held that the protest had been too long delayed to receive any consideration and that the work of making the transfer would far outweigh any advantage to be obtained.[33] In spite of this weak defense, the Federal Reserve Board refused the petition. but left the matter open to appeal[34] and on July 24. 1916 the banks which had first presented the petition took advantage of this opportunity and reopened the case. At the rehearing, held in Washington on August 8 and 9, 1916, the Board broadened its former ruling that no new evidence should be introduced and

30 Federal Reserve Board Annual Report, 1915, p. 336.
31 Ibid., p. 333.
32 Before the Federal Reserve Board: Brief in Behalf of Petitioning Banks in Wisconsin in the matter of the Transfer from District Number Nine to District Number Seven, pp. 1-4.
33 Before the Federal Reserve Board, op. cit. Brief in Reply to Petitioners. Seriatim.
34 *Commercial and Financial Chronicle,* vol. 102, p. 2131.

allowed new testimony; in the words of Governor Hamlin, "We desire to hear anything that anyone has to say."[35] This change in attitude on the part of the Board was due to the interpretation given by Senator Owen to Clause 2 of the Federal Reserve Act when he said, "My interpretation of the language is that it is to review the action and not the record, because nobody knew where the line was until it was announced."[36] The counsel for the petitioners was not present at the rehearing. However. the two Senators and four Representatives from Wisconsin and several Milwaukee bankers, although all strangers to the record, were present and were allowed to speak.[37]

Under the new ruling, the appellees presented further evidence to support their contention that their business was intimately interwoven with Chicago financial houses.[37] This evidence dealt particularly with the long standing relationship between the objecting banks and Chicago banks and it was indicated that because of this situation, credit was more easily obtained in Chicago than in Minneapolis. Other evidence dealt with the shorter running time of trains and the comparatively lower fares to Chicago.[38]

The evidence presented at the rehearing by the Minneapolis Bank's attorney placed blame for the dissatisfaction of the petitioning banks upon Milwaukee bank officers who, it was claimed, had travelled through the petitioning area urging banks to express their discontent.[39] It was shown that the petition itself carried only three signatures, the others having been collected on slips of paper over a long period of time, and that even these signatures did not total the two-thirds majority required for presentation of a petition. The Minneapolis attorney further took exception to the admittance of strangers to the record, both the Senators and Representatives and the Milwaukee bankers, and particularly objected to the latter group's being allowed to introduce a new proposal.[40] The entire procedure was considered unfair and unprecedented. "The Board should keep itself on a high plane such as the Interstate Commerce Commission. The whole method was inconsistent with judicial procedure."[41].

---

35 Before the Federal Reserve Board, op. cit., Brief in Behalf of Appellees, p. 19.
36 Idem.
37 Ibid., p. 22.
38 Idem.
39 Two items in the Houghton (Michigan) Gazette uphold this view; one stated that two officers of the First National Bank of Milwaukee had been traveling in Houghton County endeavoring to persuade banks to join them. These men had requested Local banks to call board meetings, but in general their request had been refused. Two days later a second item appeared in the same paper: "The local bankers have no desire to change their Federal Reserve District now. They are satisfied with District Nine." (Before the Federal Reserve Board, op. cit., Brief for John H. Rich, p. 6.)
40 This proposal suggested a narrow neck of counties connecting the Upper Peninsula of Michigan with the rest of the Minneapolis District.
41 Before the Federal Reserve Board, op. cit., Brief for John H. Rich, p. 6.

In order to get a true statement of opinion on this matter, the Federal Reserve Board conducted a poll of the 61 banks which would be affected by a change; 49 banks favored the transfer and 9 were opposed to it, 2 were indifferent and one refrained from voting.[42] On the basis of this distribution of votes, the Board decided to grant the petition, the transfer to take place January 1, 1917.[43] It was unfortunate that this territory along with upper Michigan had not been included originally in the Chicago district as had been requested.[44]

In spite of the fact that the vote justified the Board in their decision, the evidence of political pressure gives an unfortunate angle to the affair. Although such influence was denied, the fact remains that politicians were present at the rehearing, at which time the Board reversed its previous ruling and allowed all possible testimony to be presented, establishing the precedent of accepting the testimony of strangers to the record. Whether the Board was influenced by political interests or not, and even though it was justified in granting the petition, the appearance of evil, at least, was not avoided.

There was some contradiction in the testimony concerning the part played by Milwaukee bankers, but their presence at the rehearing indicates that they were at least interested in the outcome of the case. Judge Rich cited evidence to show that they were actively interested in fomenting unrest because they were afraid of losing deposits to Minneapolis banks. This fear seems to have had no grounds for the item "Due to Banks" as reported by the Comptroller of the Currency for the years 1912 to 1919 showed no unusual change. The average Milwaukee holdings of bankers' deposits in both 1913 and 1914 were 47% of the amount held by Minneapolis and about equal to the deposits held by St. Paul. In 1916, Milwaukee banks held an average of 47.5% as much as Minneapolis. By 1917, the percentage rose to 50%, and in 1918 fell to 46%.[45] Although, as these figures indicate, Milwaukee banks had not actually been injured by loss of deposits to Minneapolis, nevertheless the transfer of the Wisconsin banks brought a gain in 1917. The advantage to Milwaukee is further evidenced by the fact that in the first "call" for national banks in 1917, the item "Due to Banks" in the Minneapolis report had decreased $7,000,000 since the last report of the previous year.[46] This was an unusual

---

42 Data in the Library of Federal Reserve Board.
43 Federal Reserve Board Annual Report, 1916.
44 By this decision the following Wisconsin counties were transferred from District Number 9 to District Number 7: Ames, Brown, Calumet, Clark, Door, Fondulac, Green Lake, Jackson, Juneau, Wewaunee, Laglade, Manitowoc, Marathon, Marinette, Marquette, Monroe, Oconto, Outagamie, Portage, Shawano, Sheboygan, Waupaca, Washara, Winnebago, and Wood.
45 Compiled from Reports of the Comptroller of Currency, 1912-1919.
46 *Annual Report* Comptroller of Currency, 1916.

state of affairs since in the years studied there had always been an increase in this item in the first call. Concurring with this, the 1917 consolidated statement for Milwaukee banks, showed increase in bankers' deposits to the highest figure reported between 1912 and 1919. As a control in the observation of these facts, the deposits in the St. Paul banks were studied and discovered to have shown no unusual movement during the latter part of 1916 and early 1917. Consequently, it may be concluded that although Milwaukee banks had not lost any large amount of deposits to Minneapolis banks up to 1916, some deposits were gained by the transfer of the Wisconsin banks to the Chicago Federal Reserve District. Such a result was enough to account for the interest taken in the matter by Milwaukee bankers.

Since January 1, 1917, there have been no changes in the boundaries of the Seventh Federal Reserve District.

ORGANIZING THE FEDERAL RESERVE BANK OF CHICAGO

After the districting decision in 1914, the Secretary of the Treasury set about organizing the Federal Reserve System immediately, in spite of attempts from some quarters to delay organization until after the European War had been concluded.[47] Five banks in each of the Districts were arbitrarily designated as incorporators whose applications for incorporaton of the Reserve Bank were in the Secretary's hands by May 8. Upon receiving these applications for the charter, elections of directors for the Reserve Banks were held. The results of these elections were announced August 10, 1914, but the Government directors were not announced by the Federal Reserve Board until early in October.[48] Although some complaint was made that representation was not equal and that Chicago directors were selecting the staff of the Bank in order to promote their own interest, the directors chosen in the Seventh District were apparently prominent men from various localities in the district.[49]

---

[47] Clark, L. E. *"Central Banking Under the Federal Reserve System,"* p. 74 et sequi.

[48] Federal Reserve Board, *Annual Report,* 1914, p. 7.

[49] The first Board of Directors of the Federal Reserve Bank of Chicago was constituted as follows:

Class A.

George M. Reynolds, President, Continental & Commercial National Bank, Chicago.

J. B. Forgan, President, First National Bank, Chicago.

E. L. Johnson, Vice-President, Leavitt & Johnson Banking Co., Waterloo, Ia.

Class B.

A. H. Vogel, General Manager, Pfister & Vogel Leather Co., Milwaukee, Wisc.

H. B. Joy, President, Packard Motor Car Company, Detroit, Mich.

H. B. Hutchison, Ottumwa, Ia.

Class C.

C. H. Bosworth, Federal Reserve Agent and Chairman of the Board of Directors.

W. L. McLallen, Deputy Federal Reserve Agent; Director Farmers National Bank and Provident Trust Co., Columbia City, Ind.

E. T. Meredith, Publsher of "Farmers Tribune," Des Moines, Ia.

APPOINTMENT OF OFFICERS

The first meeting of the Chicago Board of Directors was held in the Chicago Clearing House on October 13, 1914.[50] Mr. F. A. Delano, Vice-Governor of the Federal Reserve Board was present to state his views and give his advice. Although many of the Reserve Banks had selected their Governors before the Washington Conference on October 20, the Chicago Directors delayed their decision until October 23 after their return from Washington, at which time Mr. James B. McDougal, was offered the position. Mr. McDougal, known as "the silent man of LaSalle Street," was chief examiner of the Chicago Clearing House Association and had many years of experience as a banker and as national bank examiner.[51]

Governor McDougal appointed as Deputy Governor, Mr. R. C. McKay who had been with the First National Bank of Chicago from boyhood and was head of the transit Department of that bank.[52] Mr. Bentley G. McCloed, who had been associated with Governor McDougal on the Clearing House staff, was appointed Cashier, and Mr. L. B. Cramer, Comptroller. With these officers and thirty-two employees, the Federal Reserve Bank of Chicago opened for business on November 16, 1914. Although the charter had not arrived at that time, an authorizing letter had been received from Secretary McAdoo.[53]

THE MONEY TRUST CONTROVERSY.

Early in 1915, a protest appeared in the Chicago Tribune charging that Reserve Bank officers' appointments had been dominated by the "money trust." Evidently, judging from these charges, the Chicago bankers instead of registering disapproval of the Reserve System by attempting to establish a rival bank as their New York brethren had done, were accepting the situation with apparent good grace and setting out to dominate the Reserve Bank with their own and the Bank's ultimate success in view.[54]

In the ten specific charges,[55] it was stated that Mr. Reynolds and Mr. Forgan had "stuffed" the Reserve Bank with their own appointees and that officials of the Bank had been designated in such a way as to create vacancies into which members of the Reynolds and Forgan families could be advanced: the appointment of C. H. Bosworth as Agent was believed to have made possible the

50 Federal Reserve Board, *Annual Report,* 1915, p. 281.
51 Interview with a Chicago Reserve Banker.
52 Mr. McKay was later influential in the development of the clearing and collection system of the Federal Reserve System.
53 The framed letter and the pen with which it was signed now hang in the office of the Assistant Federal Reserve Agent.
54 Clark, L. E., op. cit., p. 316 et sequi.
Mr. J. B. Forgan states that since his bank had a large investment in the Reserve Bank, he was naturally very much interested in seeing the Bank succeed.
55 *Chicago Tribune,* January 4, 1915.

advancement of Mr. Reynolds' son to the vacant presidency of the Peoples Trust and Savings Bank, and the resignation of Mr. McDougal from the Clearing House was believed to have made possible the advancement of Mr. Forgan's son in the First National controlled Second Security Bank.[56]

The protest further stated that the Reserve Bank had taken over the Hibernian Bank building owned by the Continental National Bank, at a higher rental than would have been necessary for similar quarters elsewhere. Finally, it was charged that country banks had not been consulted at any time regarding any of these arrangements, and moreover that in order to preserve country bank business for the large Chicago banks, "stiff" borrowing rules were maintained at the reserve Bank to discourage use of its facilities.[57]

These charges were not allowed to go unanswered. In a published statement, Mr. Reynolds set forth his belief that the attack of criticism had been instigated by a certain politician who had wished political preference rather than merit and ability to be the basis for Reserve Bank appointments. Naturally, Mr. Reynolds intimated, he and Mr. Forgan were interested in the success of the Reserve Bank, for had not their banks provided 25% of the capital and 40% of the deposits? However, he asserted that the appointments had been made on merit and ability only, citing the facts that Mr. Bosworth had been recommended by most of the leading bankers in Chicago and that Mr. McDougal had been recommended by the Federal Reserve Board. So far as the Hibernian Bank was concerned, this building had been found by an independent investigation committee to be the best possible headquarters for the Bank, and moreover the Reserve Bank had been asked to pay only $15,000 for $80,000 worth of fixtures. Mr. Reynolds further assured the public that country banks had concurred in all these actions for the resolutions concerning them had been adopted unanimously by the Board of Directors of the Bank through whom the country banks were represented; moreover, the charge that attempts had been made to discourage country bank access to the Reserve Bank was false: there could have been no such attempt because the rules of eligibility were set by the Federal Reserve Board.

This dispute naturally came to the attention of the Federal Reserve Board. Mr. H. B. Joy, a director, wrote to the Vice Governor stating that the charges were "a lot of pure, unadulterated, sensational slush to stir prejudice and trouble."[58] Carter Glass was very much disturbed by this characterization and wrote a "blister-

56 Idem.
57 Idem.
58 *Commercial and Financial Chronicle*, p. 184, 1915.

ing" letter to Mr. Joy.[59] Representative Lindbergh took up the cudgels for the protestants using the incident as the means of another attack on the "money trust."[60]

The difficulties arising from the charges brought against Mr. Reynolds and Mr. Forgan were evidently developed by a desire for political vengeances on the part of a prominent Illinois politician. This politician had called one day at the offce of the Governor of the Reserve Bank of Chicago and in the course of the conversation had commented on the fact that all the employees of the Reserve Bank were of one political faith, which happened to be the opposite of his own. He was informed that political beliefs had nothing to do with employment in the bank, the qualifications being only merit and ability. Upon his further objection to the costliness of the Bank's fixtures,[61] he had been informed that such matters were no concern of his and he could tell those whom he represented as much. Whereupon, the politician left the Bank much incensed,[62] and later the same day chanced to meet a leading Chicago banker at luncheon. During their talk, the politician had complained of being "insulted" at the Reserve Bank, but upon hearing what remarks had provoked the "insult," the banker also had become incensed and had ordered the politician to leave his table at once.[63]

A short time after the occurrence of this incident involving the politician, the charges discussed above were published and it seems likely that they originated in an attempt to obtain vengeance either because of personal resentment or because of disappointment resulting from not having received some "political plums" to distribute. At the same time, however, there was little doubt in the minds of some Chicago bankers that Mr. Reynolds and Mr. Forgan had wielded considerable influence in the organization of the Bank,[64] and considering the prominence in financial circles of these two men, such a conclusion probably was inevitable. However, there can be no doubt that the men selected to head the Bank were men of ability; this fact the history of the operation of the Bank reveals. The grounds for criticism in the Money Trust controversy probably lay in the fact that Mr. Reynolds and Mr. Forgan were not so discreet as they might have been in filling vacant positions from their own families.

COST OF ORGANIZATION

The total expenses for the organization of the Federal Reserve Bank of Chicago amounted to $39,498, of which $23,307 was

59 Idem.
60 Ibid., p. 110.
61 At the time there was an oriental rug on the floor which had merely been "loaned" by a Chicago department store and placed there without the bank's permission.
62 Interview with Chicago bankers.
63 Idem.
64 Interview with a Chicago banker.

assessed for the expenses of the Federal Reserve Board.[65] The former figure represented 10.4% of the cost for organization of the entire system. On the basis of an equal organization expense for each district, the average percentage would have been 8.43%. The higher figure of 10.4% for the Chicago Bank may be partially accounted for by the fact that the assessment of the Federal Reserve Board were made in proportion to the capital stock and surplus of each Bank.[66] Since the Chicago Bank had the second largest amount of capital, the assessment for Board expenses were above the average and would tend to throw the total organization expense for Chicago above the average. If the Board assessments are deducted, the organization expense for Chicago was still slightly above the average, being 8.9% of the total cost of the System.

The cost of equipment for the Chicago Bank was $26,210 as compared with an average cost of $21,057 for the twelve banks. The Chicago Bank spent 9.2% of the total spent for equipment by all twelve banks. This also is slightly above the average and may be accounted for by the fact that the Chicago Bank had to prepare to handle more business than any other except the New York Bank.

Table 19.

END OF FIRST FOUR DAYS OF OPERATION
FEDERAL RESERVE BANK OF CHICAGO*

Assets

Bill Discounted	$ 130,522.73
With Federal Reserve Agent to Secure Notes	1,000,000.00
Total Loans and Discounts	1,130,522.73
Expense	20,116.91
Federal Reserve Notes on hand	180,685.00
Nickles and Cents	15.32
Total Deductions	180,700.32
Gold Bullion	2,868,160.00
Gold Certificates	28,414,765.00
Clearing House Certificates	5,405,000.00
Silver Certificates	512,090.00
Legal Tender Notes	2,726,000.00
Total Reserve	39,991,715.00
Total Resources	$41,323,054.96
Cash Reserve Against Liabilities:	
Carried	$39,991,715.00
Required	15,710.979.00
Excess	26,280,736.00

[65] Federal Reserve Board, *Annual Report* 1915, p. 92.
[66] Federal Reserve Act, Section 10.

TABLE 19—Continued from Page 44

Liabilities

Capital	$ 2,195,188.47
Unearned Discount	4,284.85
Federal Reserve Notes	1,000,000.00
Due Members	38,101,869.61
Due Other Federal Reserve Banks	20,000.00
Cashier Checks	1,711.73
Gross Deposits	38,123,581.64
Total Liabilities	$41,323,054.96

* Daily Reports of Condition in the Library of the Federal Reserve Bank of Chicago.

CHAPTER IV.

INTERNAL ORGANIZATION AND MEMBER BANK RELATIONS

The Preliminary Committee on Organization, in order to facilitate the establishment of the Reserve System and provide for a more or less uniform structure of the various Reserve Banks, drew up a set of model by-laws and a plan of internal organization for regional banks.[1] Neither the by-laws nor the plan of internal organization were adopted by the Chicago Reserve Bank exactly as presented by the Committee, but were modified to meet local conditions and customs.

BY-LAWS

The by-laws suggested by the Preliminary Committee on Organization prescribed the duties of directors and the general procedure to be followed in conducting directors' meetings.[2] The directors were to have power to appoint and remove Bank officers and to control ultimately the functioning of the Bank, but in order to facilitate operations, an Executive Committee was provided to be composed of the President of the Bank, the Federal Reserve Agent and one each of the Class A and Class B directors. The term of directors on the Executive Committee were to rotate so that all would eventually serve.[3] The Executive Committee was given power to pass on all commercial paper offered for rediscount, to initiate open market operations, to recommend changes in the rediscount rate, and to provide for Federal Reserve notes.[4] Further by-laws provided for the auditing of the bank by the Federal Reserve Agent and for weekly reports of conditions, and defined the duties of the various officers, making the President next in authority to the Board of Directors.[5]

These by-laws suggested by the Preliminary Committee were first modified by the Organization Committee in two definite particulars:[6] an added provision stated that the Chairman of the Board of Directors must call a meeting of the Board upon written request either of three directors or of the Governor of the Bank;[7] a second change substituted the title "Governor" for "President" and "Deputy Governor" for "Vice President."[8]

---

1 Federal Reserve Board, *Annual Report* 1914, p. 20 et sequi, and *Annual Report* 1917, p. 46.
2 Federal Reserve Board, *Annual Report* 1914, p. 75 et sequi.
3 Federal Reserve Board, op,cit., p. 22; Articles I and III, Model By-Laws.
4 Article III.
5 Article III—X.
6 Willis, H. P. *"The Federal Reserve System"*. p. 689.
7 Federal Reserve Board, *Annual Report* 1914, p. 77.
8 Ibid., p. 76.

The by-laws of the Federal Reserve Bank of Chicago are similar to those proposed by the Organization Committee with one important exception: instead of rotating the terms of directors serving on the Executive Committee, for the sake of convenience, the Chicago Executive Committee is composed of the Governor and those directors who live in or near the metropolis. In the early days the Committee was merely a recommending body but upon the dictates of experience, it has been made more powerful. Today, its authority is almost equal to that of the Board of Directors in matters of routine and also in matters of policy when a quick decision must be reached. In the latter case, the Board must ratify the decision and when time permits, the entire Board is called to decide policy problems. The by-laws of the Chicago Bank have not been changed since these additional powers were given to the Executive Committee.[9]

INTERNAL STRUCTURE

Organization Committee Plan

Under the proposed plan of internal organization for Reserve Banks, the Organization Committee placed the Board of Directors at the head of the Bank according to customary practise; the Federal Reserve Agent was given the chairmanship of the Board and an officer known as the Governor, not necessarily a member of the Board, was made operating head of the Bank. Both the Federal Reserve Agent and the Governor were to be aided by Assistant Federal Reserve Agents and Deputy Governors, respectively. Subordinant to the Deputy Governors were a Cashier and two Assistant Cashiers, the latter to have charge of the Banking Division and the Credit Division.

The Banking Division according to the Organization Committee plan was to be composed of seven departments, each under a manager: (1) The general department was to have supervision over stenographic work, filing, stationery, and related items. (2) The statistical department was to make analyses of costs and expenses. (3) The bookkeeping department was to keep records of the deposits of and loans to member banks, and of the Government's deposits. (4) The foreign exchange department was to provide for the activities of the Bank in the foreign field. (5) The transit department was to care for incoming and outgoing mail. (6) The tellers department was to take care of paying, receiving and transfers, and also the clearance and collection of checks. (7) The loans and investment department was to have charge of rediscounts,

9 The By-Laws of the Reserve Bank of Chicago are considered confidential, many ocicers of the Bank not having a copy in their possession. The material herein discussed was obtained by an interview with Mr. C. S. Young, Assistant Federal Reserve Agent. The By-Laws cover four printed pages 8½ inches by 10 inches.

open market investments and investment in securities, as well as all loan transactions.

The Credit Division, under one Assistant Cashier, was to make credit analyses.

The Auditing Division was to be managed by an Auditor, but was directly responsible through the Executive Committee to the Federal Reserve Agent. This division was to take charge of cancelled vouchers, keep loose-leaf records, and make reconcilements.

The Federal Reserve Board Plan, 1918

In 1918, the Federal Reserve Board published a plan of the typical Reserve Bank,[10] which indicated a greater separation of duties between the Agent and the Governor than was anticipated in the above plan suggested by the Organization Committee. According to the 1918 plan, the Agent maintained a staff to care for credit and credit files and to carry on duties as auditor and either he or one of his deputies acted as Secretary of the Board.

In the Banking Division the Governor, Deputy Governor and Cashier arrangement was continued. Assistant Cashiers were made department heads, however, rather than the managers of the 1914 plan. Branches of the Federal Reserve Banks were placed under a Deputy Governor, with an Assistant Federal Reserve Agent performing the same duties which the Agent performed in the parent bank.

The Counsel was given a place in the organization and was directly responsible to the Board of Directors and Executive Committee in handling all problems of law arising as well as insurance and surety bonds.

Chicago Bank Internal Structure

Information regarding the early internal organization of the Federal Reserve Bank of Chicago is rather meagre. The early set-up was somewhat similar to that proposed by the Organization Committee except that the Governor held a more important position than was given him in that plan. The Chicago Bank, the first Bank to make an attempt to study scientifically the general credit situation with a view to determining the discount policy, organized a Statistical Department in 1918.[11]

By 1923, the internal organization of the Chicago Bank had been considerably modified. The Governor still maintained his assistants as Deputy Governors, but there was no longer a Cashier, the places left by him and his assistants being taken by officers known as Comptrollers, who, with department managers under

[10] Federal Reserve Board, *Annual Report* 1918, p. 374.
[11] E. M. Huston and Andrew Russel, "*History of Banking in Illinois*", p. 493.

them, headed the following divisions: Accounting, Investments, Fiscal Agency, Cash and Custodian, Loan, Credit, Administration, and Collection. The departments included under these divisions were as follows: planning, cash, investment, research, bank, securities, disbursing, cash custody, bank relations, checks, member bank accounts, collection, accounting, service, Michigan and Wisconsin loans, Illinois and Indiana loans, Iowa loans, and credit.[12] The heads of divisions were later called Assistant Deputy Governors rather than Comptrollers, among whom there was some division of duty, although the lines of the diagram picturing the official organization indicate that division of labor and responsibilty was not definite.[13]

By February 1934, the official organization of the Federal Reserve Bank of Chicago was considerably more complex than its early form.[14] The Bank was headed, as would be expected by the Board of Directors, with the Executive Committee next in authority. The Federal Reserve Agent was a member of both bodies, and the Assistant Federal Reserve Agent was Secretary of both. The Agent had no direct connection with the Governor, other than that both were members of the Executive Committee and that the Governor attended all meetings of the Board of Directors. The Board, the Agent and the Governor all had access to the General Counsel. Next in authority to the Executive Committee was the Governor. In order to assist him in his problems, an organization of Bnak officials known as the Managing Committee, held frequent meetings. This committee was composed of the Governor, who is Chairman, the Chairman of the Board of Directors, the Deputy Governors and the Assistant Deputy Governors. Besides the three Deputy Governors, there were five Assistant Deputy Governors under whose supervisory charge were one or more departments, each department being directly headed by a manager.

Under the plan in effect in 1934, there were sixteen departments: checks, collection, investment, fiscal agency, cash, cash custody, securities, service, disbursing, credit loans discount member bank accounts, accounting, planning, personnel, and RFC custody.

The Check Department was divided into two divisions; the local check division and the out of town check division.

The Collection Department had two divisions; collection and wire transfer. Both the Check and Collection Departments were

12 Ibid., p. 492.

13 Through the courtesy of the Planning Department of the Reserve Bank of Chicago, a plan of the official organization of the Bank was given the writer, on the condition that only a description, not the picture of the plan be published.

14 Data concerning the internal organization of the Chicago Bank is not available in detail for the years between 1923 and 1934.

directly supervised by an Assistant Deputy Governor, under Deputy Governor A.[15]

The Investment Department had no Assistant Deputy Governor in charge but was evidently supervised by Governor A. This department had three divisions: investment-securities, bills, and foreign investments.

The Fiscal Agency Department had four divisions: coupon surrenders, registered surrenders, issue, and accounts and records. One Assistant Deputy Governor, under Deputy Governor A, gave his full attention to this department.

The three deparmtents: Cash, Cash Custody, and Securities, were under one Assistant Deputy Governor, also under Deputy Governor A. The Cash Department was divided into two parts: receiving and paying. The Securities Department had one division, collateral and safe-keeping.

The responsibility for the Service and Disbursing Departments was shared by Deputy Governor B, and the same Assistant who had charge of the three Departments mentioned immediately above. The Service Department had nine divisions, the largest number under any one department: equipment and supplies, mail, stenographic, files, leased wire, code and telegraph, protection, office maintenance, and building maintenance. The Disbursing Department had no divisions, but functioned as a unit.

The Credit and Loan Departments were supervised by Deputy Governors B and C, and one Assistant Deputy Governor. The Credit Department had three divisions: bank credit, commercial credit, and agricultural credit. This department also handled loans in Michigan and Wisconsin. Closely connected with the Credit Departmen was the Loan Department which cared for the loans made to banks in Illinois, Indiana and Iowa.

Deputy Governors B and C and one Assistant, supervised the four departments: Discount, Member Bank Accounts and Accounting, Planning, and Personnel. The Discount Department had two divisions: discounts and claims; the Accounting Department, four divisions: member bank reserves, bookkeeping, Federal Reserve books, and general books. The Planning Department functioned as a unit. The Personnel Department had three divisions: employment, personal, and cafeteria.

The RFC Custody Department, with no divisions, was under the direct supervision of Deputy Governor C.

The Detroit Branch of the Chicago Reserve Bank was connected with the parent bank through the Board of Directors of the two institutions, and through Deputy Governor C. The Managing

---

[15] For convenience in discussion, the Deputy Governors will be denoted by A, B and C.

Director was the chief executive officer of the Branch, and was assisted by the Cashier.

A noticeable characteristic of the plan of organization in operation in 1934 was the fact that responsibility of the Deputy Governors and Assistant Deputy Governors was not definitely divided. Each was made responsible to some extent for departments with which he was not directly connected. At this writing it is proposed to change this plan in January 1935 to make responsibility more definite and centralized.

The proposed plan of organization makes no changes so far as the senior officers are concerned, with the exception of the addition of a Loan Committee,[16] an offshoot of the Managing Committee, which will be directly connected with the Deputy Governor in charge of credits.

Each Deputy Governor will be given definite charge of certain departments, and overlapping of responsibility will be eliminated. The responsibilities of Assistant Deputy Governors are also more clearly defined. The arrangement of departments with managers and division chiefs remains unchanged. Under the proposed plan, each of two Deputy Governors will be assisted by two Assistant Deputy Governors, while one Deputy Governor will have only one Assistant.

Deputy Governor A will have charge of the following Departments: Check, Collection, Investment, Cash, Cash Custody, and Securities: One Assistant Deputy Governor will supervise both the Check and Collection Departments. The Check Department will be reorganized into night and day sections; each section will have divisions for receiving and proving, city, country and government items, forwarding, and adjustment. Another Assistant Deputy Governor will supervise the Investment, Cash, Cash Custody and Securities Departments. The only change to be made in the organization of this group of departments is the slight one in the Cash Custory Department of altering the receiving division to the receiving and paying division.

Deputy Governor B is to have four departments under his control. One Assistant Deputy Governor will give his sole attention to the Fiscal Agency Department; another Assistant will oversee the RFC Custody Department, the Credit Department and the Discount Department. Deputy Governor B will be in particularly close touch with the Loan Committee.

One Assistant and Deputy Governor C will have charge of five departments: the Disbursing Department, the Personnel and Service Department, the Member and Federal Reserve Accounting Depart-

16 This plan is described through the courtesy of the Planning Department of the Federal Reserve Bank of Chicago.

ment, the Planning Department, and the Building and Protection Department. In this group, the Service Department will experience the greatest revision, the former divisions for maintenance and protection being merged with the Service Department. Under the new plan, the divisions of the Service and Personnel Department will be: employment, personal service, cafeteria, leased wire, filing and stenography, mail, office maintenance, and codes and telegraph. The Planning Department, also in the above group, will undergo considerable change: in addition to the work already engaged in, it will include a general books division formerly in the Accounting Department, and also the purchasing, printing and stockroom divisions. The Building and Protective Department, a new department, will contain two divisions: building maintenance and protection.

This proposed plan of organization is no doubt more logical than the one now in use (November, 1934). Responsibility is definitely placed and overlapping of authority is avoided. It should result in greater specialization on the part of certain administrative officers, and consequently, in more efficient operation.[17]

Relation of Governor and Federal Reserve Agent

Conflicts between Governors and Federal Reserve Agents are inherent in the situation of dual control prevailing in all Federal Reserve Banks, and because of inadequate definition and confused interpretation of central banking functions during the organization of the System, the relationship between these two offices has been the perplexing focus of a number of problems. When the System was being organized, the general opinion prevailed that the Agent was not to be the sole executive officer, but that the Banks were to have also an operating head.[18] The Federal Reserve Board considered the difference between Agent and Governor to be that between a maker of policy or developer of a general system of organization and the factor employed in carrying out such policies nad systems of oragnization.[19] Senator Glass, however, expressed a different view. In examining Governor Harrison of the Reserve Bank of New York at the Senate Hearing on "Operations of the Banking System," he stated quite definitely that he thought the Governors had usurped most of their power and that the intention of the framers of the Act had been that the Federal Reserve Agent be chief executive officer.[20]

The conflicts resulting from this anamolous situation were not

17 Either because of the neophobia of bankers, or some other undefined cause, this plan of revised organization was voted down, and the organization described as prevailing in 1934 still persists.
18 Willis, H. P., op.cit., p. 693.
19 Ibid., p. 689.
20 Hearings, Senate: *"Operations of the Banking System."* P. 41 and 42. Senate Resolution No. 71, 71st Congress, 3rd Session.

of a personal nature, but arose because of a different viewpoint between those bankers who were jealous of government interference and the government representatives on the Board of the Banks who were members ostensibly to protect the public interest. In most cases, the New York Reserve Bank for instance, the conflict resulted in the subordination of the Agent and the victory of the Governor in official priority. The Federal Reserve Board was at fault to a great extent for this subordination of Agents. In the early days of the operation of the System, all communications to the Banks were made through the Agent. Then the practise grew up of communicating by duplicate letters to each officer, Agent and Governor; this became necessary because in some cases Governors refused to take instructions from Agents. Finally the Agent was communicated with only when the matter concerned him directly and consequently he was often ignorant of the instructions received from the Board by the Governor.[21] By adopting such a policy, the Reserve Board failed to support its own representatives in the Banks.

Another reason that the Agents had difficulty in maintaining anything but their titular headship was the fact that their salaries generally ranged lower than those of the Governors and their positions were accordingly considered subordinate. For example, at the Chicago Bank in 1915, the Agent received $10,000 a year and the Governor, $20,000. In 1917, the Governor's salary was raised to $24,000 and the following year the Agent's salary was increased to 50% of that amount. In 1919, both Governor and Agent received an increase of $6,000. In 1920, the Governor's salary was raised to $35,000 and the Agent's to $24,000, at which figures they remained until 1931. When Mr. Eugene Stevens became Federal Reserve Agent, the salary for the Agent's position was increased to equal that of the Governor.[22]

There are no records of a conflict between the Agent and Governor in the Federal Reserve Bank of Chicago, although there are reports showing that the Governor ignored the Agent and his wishes at times. However, these differences of opinion were never bitter enough to cause an open break.[23] During the War, the Agent and the Governor shared the responsibilities of financing the Liberty Loans in the Seventh District since they alternated as chairmen of important committees, in each case the other serving as vice chairman of the committee. Since the advent in 1930 of Eugene M. Stevens as Federal Reserve Agent, cooperation between Agent and Governor has been closer than ever before.[25] During recent

21 Willis, H. P., op.cit., p. 700.
22 Compiled from Annual Reports of the Federal Reserve Board, 1914-1934.
23 Interviews with Chicago bankers.
24 Huston and Russell, *"History of Banking in Illinois"*, p. 430.
25 Interview with Mr. C. S. Young, Assistant Federal Reserve Agent, Federal Reserve Bank of Chicago.

years, it has been the practise of the senior officers of the Bank to meet each morning and discuss their various problems. In these meetings, composed of Governor, Agent and their assistants, the problems of each are discussed and a general policy decided upon, with the result that the policy of the Bank emerges as a policy of the whole, making more efficient operation and better public service.[26]

RESERVE BANK INFLUENCE ON MEMBER BANKS' STANDARDS

The Reserve Bank's internal organization functions, in its contacts both with the Member Banks of the System and with its member banks, through the office of the Federal Reserve Agent. Observing the Agent's duties, therefore, gives an outline of the functional activities of the Bank; his duties are of two distinct types. The first class of duties involves the Bank's operations as an element in the Reserve System. The Agent functions as Chairman of the Board and as a member of the Executive Committee; he acts as custodian for unissued currency and for collateral and gold used as backing for issued notes; and he represents the Government. The Bank's activities as a central banking institution, which the above duties of the Agent are a part, will be the subject of the following chapters of this study. The remainder of the present chapter, however, considers bank membership the second class, in relation with which the Reserve Bank through the Agent has the principal responsibilities of examination of members and prospective members and maintenance of adequate banking standards, making recommendations to the Federal Reserve Bank regarding applications of national banks to exercise trust powers, and membership promotion among non-member banks.

Examination and Banking Standards

An important contact between the Reserve Bank and its members occurs in the examination of member and prospective member banks. In general, national bank examiners' reports on national banks are accepted by the Reserve Bank, but the Agent, in conjunction with state examiners, conducts his own examination of state bank members. In the course of a bank examination, every phase of operation is investigated with particular stress played on the analysis of loans and discounts in order to determine the distribution of loans among various lines of industry, the distribution of loans to one interest, and the general soundness of loans. Analyses are made also of other investments, namely bonds, other securities and real estate loans.[27]

---

26 Interview with Mr. C. S. Young, Assistant Federal Reserve Agent, Federal Reserve Bank of Chicago.
27 Idem.

The report of examiners includes a verification of the items reported on the balance sheet such as reserve, bankers' balances, acceptances and letters of credit, and a report of the earnings and dividend policy. Also the methods and operating mechanics of the bank are reported, together with an estimation of the degree of interest in the bank evinced by its director.[28]

Each director of the Reserve Bank is provided with a condensed report of each member bank's examination, the first part of which is composed of a balance sheet as of the day of examination and the second part of which concerned the liabilities of officers and directors, and any firms in whihc they are interested. The latter portion of the report is used only if a bank is controlled by a holding company or if it owns affiliate organizations, in which case the exact relationship is described. Such condensed reports are designed to guide the Reserve Bank in its policy towards each individual member bank.[29]

After studying the results of examinations, the Agent and his staff of examiners attempt to formulate criticisms and suggestions which will improve banking practise. One important group of criticisms concerns the investment policies of banks examined. The importance of investments to member banks is shown by Table 20; the bulk of member bank income is from this source.

Table 20.

EARNINGS FROM LOANS AND INVESTMENTS
NATIONAL AND STATE BANK MEMBERS†
(Percent of Total Eearnings)

	1919	1920	1921	1922	1923
All Members	*	*	90.2	86.2	87.8
National	95.3**	84.6**	94.4	91.2	91.4
State Members	69.0	87.1	84.4	80.3	81.9
	1924	1925	1926	1927	1928
All Members	87.3	88.2	83.7	82.4	81.1
National	91.1	90.7	89.0	88.8	87.2
State Members	81.9	83.5	78.0	74.8	74.2
	1929	1930	1931	1932	1933
All Members	82.9	86.8	82.0	83.9	80.3
National	81.3	85.2	85.6	84.1	80.3
State Members	84.2	87.8	79.4	78.7	81.2

* Data not available.
** Data for entire states represented in Seventh District.
†Computed from data published in the Federal Reserve Bulletin 1919-1933.

28 Idem.
29 Idem.

Since member banks are mainly of two classes, national and state, and since state banks are examined by the banking departments of the respective states with no attempt to coordinate with national examining policies, the Reserve Bank is in a position to effect coordination of policy between national banks and the institutions of the several states in its district, and in doing so to raise the standards of investment practise and to prevent bad investments and consequent losses. However, the examination policy of the Federal Reserve Bank of Chicago, like that of most examining agencies, has not furnished complete immunity to member banks against losses. Neither has the Chicago Bank coordinated investment policies as can be seen from the fact that there has been considerable discrepancy in the relative losses of national and state banks.

National banks in the Seventh District generally suffered greater losses per bank from 1922 to 1928, but in the following period, state banks were the greater losers. In comparing losses to net earnings, national banks suffered more severely from 1919 to 1931, but after the latter date, state banks lost a larger percent of their net earning because of bad loans. In 1933 state banks lost 362.9% of their net earnings! Throughout the period 1919 to 1933, losses of national banks amounted to 45.5% of net earnings and losses of state bank members to 45.9%.

Net losses of members of the Seventh District have never amounted to a large percentage of earning assists although during the last several years there has been a tendency for this ratio to increase. The average loss for the entire period has been only 0.85% of total earning assets.

Table 21.

RATIO OF NET LOSSES TO NET EARNINGS*

	1919	1920	1921	1922	1923
All Member Banks	20.0	18.9	26.4	37.0	33.3
National Banks	22.3	20.7	29.2	57.7	43.1
State Banks	18.9	16.1	22.3	21.2	16.3
	1924	**1925**	**1926**	**1927**	**1928**
All Member Banks	31.3	31.1	20.9	21.3	23.1
National Banks	40.0	36.5	30.0	27.6	33.3
State Banks	19.4	19.4	11.4	11.3	15.3
	1929	**1930**	**1931**	**1932**	**1933**
All Member Banks	24.4	36.1	47.7	125.3	137.0
National Banks	28.6	58.3	23.6	143.0	88.9
State Banks	15.7	23.7	29.7	84.6	362.9

* Computed from data published in the Federal Reserve Bulletins 1919-1933.

Table 22.

RATIO OF NET LOSSES TO AVERAGE EARNING ASSETS

	1919	1920	1921	1922	1923
All Member Banks	0.3	0.4	0.5	1.4	0.8
	1924	1925	1926	1927	1928
All Member Banks	0.8	1.0	0.5	0.6	0.3
	1929	1930	1931	1932	1933
All Member Banks	0.4	0.6	1.0	2.0	2.0

Computed from data published in the Federal Reserve Bulletin 1919-1934.

Bank examination is intended not only to reduce losses of banks by regulating their investment policy, but also to protect depositors further by preventing their interests being sacrificed to the stockholder's interests through failure to build an adequate surplus attendant upon too liberal a dividend policy. In other words, advice and direction toward a sound dividend policy has been a second duty of the Federal Reserve examining agency.

Reports to Chicago Reserve examiners have shown that the rate of gross earnings on capital and on capital funds has been greater for state bank members than for national banks:[30] the former averaged 41.3% on capital and 36.7% on capital funds; the latter, 37.5% on capital and 35.8% on capital funds. Net earnings for all member banks have been 10.4% on capital investment and 21.7% on capital stock. State bank members have had net earnings of 10.7% on capital investment and 25.5% on capital stock; national banks, 10.3% on capital investment and 20.1% on capital stock. 1923, the year of largest earnings, was followed by a decline to 1933 in which year member bank net earnings had fallen to 3% on capital investment and 5% on capital stock.[31]

The distribution of these earnings between dividends and surplus funds, one of the standardizing problems of the examining agency, depends upon the urgency of the stockholders' desire for returns and the concern for adequate depositor protection on the part of the bank managers, public bank authorities, and bank examining agencies. All member banks in the Seventh District have made a fairly equivalent distribution of net earnings between dividends and surplus: from 1919 to 1933, stockholders received an average of 0.99% return on earnings assets and a like percentage was set aside for surplus.

National banks paid to stockholders 14.2% of gross earnings and 50.6% of net earnings; state bank members paid to stock-

[30] All averages mentioned in this section refer to the period 1919-1933.
[31] Compiled from *Federal Reserve Bulletin*, 1923-1933.

holders 12.5% of gross earnings and 45.4% of net earnings. Evidently, therefor, state bank members had the more conservative dividend policy and set aside a larger share of earnings for the protection of their depositors.

Table 23.

RATIO OF DIVIDENDS TO GROSS EARNINGS AND TO NET EARNINGS*

Gross Earnings

	1919	1920	1921	1922	1923
All Member Banks	15.0	14.2	12.3	13.2	14.1
National Banks	16.5	15.5	13.5	15.1	15.3
State Banks	12.7	12.0	10.6	11.4	11.1
	1924	**1925**	**1926**	**1927**	**1928**
All Member Banks	13.4	12.7	12.4	12.2	14.5
National Banks	14.6	13.7	13.7	13.1	17.2
State Banks	11.4	11.6	11.1	11.4	11.6
	1929	**1930**	**1931**	**1932**	**1933***
All Member Banks	14.7	15.0	18.2	11.1	2.5
National Banks	15.0	14.0	18.2	11.0	2.4
State Banks	14.4	16.1	18.2	19.8	5.7

Net Earnings

	1919	1920	1921	1922	1923
All Member Banks	51.5	45.4	40.6	50.4	53.1
National Banks	51.3	49.2	43.2	58.2	60.2
State Banks	52.0	39.5	36.6	38.3	43.7
	1924	**1925**	**1926**	**1927**	**1928**
All Member Banks	52.6	50.4	47.1	46.9	51.2
National Banks	56.0	53.8	52.2	49.2	66.2
State Banks	46.6	44.6	42.0	45.2	47.3
	1929	**1930**	**1931**	**1932**	**1933***
All Member Banks	41.0	53.0	61.8	46.5	10.0
National Banks	42.1	50.9	57.4	35.4	24.4
State Banks	53.8	57.0	58.0	49.9	31.0

* Computed from data published in the *Federal Reserve Bulletin* 1919-1933.

From the figures in the table above, one would expect a higher earning rate on national bank stock but this has not been the case. National banks paid stockholders 5.2% on capital investment and 10.2% on capital stock whereas state bank members paid their

stockholders 5.12% on capital investment and 12.5% on capital stock.

The examining agency of the Federal Reserve Bank of Chicago, then, has had no more marked success in raising or coordinating banking standards than most of the other agencies of examination. Losses most certainly were not prevented nor were they equalized between the two most important groups of member banks, national and state. Although on the average this difference was small, still the series of figures for the years between 1919 and 1933 indicate little or no correlation: in years when national banks' losses were high, state banks' losses might be declining, and vice versa. Another bit of evidence indicating lack of coordination in the policy of the two groups of banks is the fact that national banks received a larger share of their income from purely banking operations of loan and investment than did state member banks. State banks also apparently had the more conservative dividend policy throughout the first fourteen years of operation of the Reserve System. On the whole, then, so far as available data indicates, the examining agency of the Chicago Bank has not been able to alter or coordinate banking standards appreciably among its members although what the situation might have been without such an agency, no one can say.

Recommendations for Granting Trust Powers:

In addition to the relationships implicated in its examining activities, the Reserve Bank through the Agent has other contacts with member banks in connection with its function of making recommendations to the Reserve Board with respect to applications for the exercise of trust powers.

The Federal Reserve Act as originally passed, provided for the licensing of national banks to exercise fiduciary powers which national banks had not been permitted to exercise before the passage of the Act.[32] This provision was intended to make membership in the System more desirable for national banks and to put them on a competitive basis with state banks. However, opposition arose from state banks when they realized that they were about to lose a monopoly on a privilege which they had held for many years. In 1917, the Auditor of the State of Illinois refused to grant permission to the First National Bank of Joliet to exercise trust powers, although such permission had been granted by the Reserve Board. In a mandamus suit[33] arising from this refusal by which the bank sought to force the Auditor to grant the permission, the Illinois Supreme Court upheld the State Auditor.[34]

32 Federal Reserve Act, Section 11 K.
33 "People et.al. First National Bank of Joliet, v. Andrew Russell, Auditor of Public Accounts."
34 Federal Reserve Board, Federal Reserve Bulletin, 1918, page 520.

Subsequently the same situation arose in Michigan in the case of the First National Bank of Bay City, Michigan, v. Grant Fellows, Attorney General of the State of Michigan. This suit arose after several leading trust companies petitioned the Attorney General to make a test case for the purpose of settling the question of the constitutionality of Section 11K. The Supreme Court of Michigan decided the section was unconstitutional, but in an appeal to the Supreme Court of the United States which reversed the lower court, it was found that Congress was acting within its authority in granting fiduciary powers "when not in controversion of state and local law."[35]

Following this United States Supreme Court decision, the First National Bank of Joliet appealed its case, but the Illinois Supreme Court again denied the writ of mandamus, stating that its own previous decision had not been reversed by the U. S. Supreme Court action in another case, and that such action had no effect on the parties of the case at bar. However, the State Auditor began, shortly after this, to grant permission for national banks to exercise fiduciary powers in Illinois, making it unnecessary to carry this case to the U. S. Supreme Court.[36]

In order to remove any question about the right of the Board to grant such powers, the Federal Reserve Act was amended September 26, 1918 to make national banks exercising fiduciary powers subject to state laws insofar as these laws provided adequate protection for the beneficiaries of trust estates.[37] According to Section 11K as amended, a national bank desiring to engage in fiduciary activities makes application to the Federal Reserve Board through the Reserve Agent for the necessary power. Before this application, the Agent or Assistant Agent usually has met with the offfficers and Board of Directors of the applying bank to explain to them the obligations and pitfalls involved.[38] In submitting the application to the Board, the Agent makes his recommendations, giving information about the standing of the bank, the character of its management and its fitness to exercise the desired powers. There are six reasons for which the Board will refuse to grant the permission: (1) surplus not equal to 20% of capital, (2) carrying an excess amount of slow and doubtful paper, (3) possession of real estate not authorized by law, (4) excessive over-drafts, (5) loans not well distributed, and (6) negligent directors.[39]

If the permission is granted, the national banks are compelled

[35] *Banking Law Journal*, 1917, p. 436.
[36] Federal Reserve Board, op.cit., p. 524.
[37] Federal Reserve Board Annual Report, 1918, p. 71.
[38] Interview with Mr. C. S. Young, Assistant Federal Reserve Agent, Federal Reserve Bank of Chicago.
[39] Federal Reserve Board, op.cit., 1915, p. 103.

to observe certain stipulations, the most important of which are that all assets held in a fiduciary capacity must be segregated from the other assets of the bank and separate books must be kept, and that trust funds awaiting investment must not be used in the conduct of the business of the bank unless U. S. Government Bonds or securities approved by the Federal Reserve Board are set aside in the trust department in an equal amount. If the state law requires a deposit of securities with a state authority, the banks must comply. In addition, no national bank may receive in its trust department any deposits of current funds, or bills of exchange.[40]

The Federal Reserve Board grants nine different fiduciary powers: trustee, executor, administrator, registrar of stocks and bonds, guardian of estates, assignee, receiver, committee of estates of lunatics, and any other fiduciary power which state bank competitors may possess.[41] A bank may apply for one or more of these powers and the Board may grant one or more as it sees fit.

The number of national banks in the Seventh District exercising fiduciary powers increased from 169 in 1919 to 379 in 1932; in 1933, however, it had decreased to 235. In 1919, Iowa had the largest number of national banks with fiduciary powers; in 1922, Indiana had the largest number; and in 1929, Illinois. By 1932, Michigan had the most, but in 1933 Illinois again was first.

In 1919 national banks exercising fiduciary powers had a larger average capital than state banks exercising these powers: the respective averages were $211,000 and $167,000. Michigan state banks averaged $361,000 capital per bank and Michigan national banks, $104,000; in Wisconsin, however, national banks averaged $265,000 and state banks $196,000. In 1922, considering the entire district, state banks with fiduciary powers had the larger capitalization. By 1929, the average capitalization of national banks exercising fiduciary powers had increased in every state but Wisconsin. By 1933, among banks with trust powers, the average capitalization of national banks surpassed that of state banks in Illinois, Iowa and Wisconsin. In the other two states of the district, state banks still had the larger capitalization.

On the whole, then, from 1922 to 1929, state banks with trust powers had a larger capital than national banks with trust powers. The tendency since the latter year has been an increase in capital of national banks. Evidently, therefore, the Reserve Board, acting on the recommendations of the Federal Reserve Agent, has not made it a practise to maintain as high capitalization standards for banks acting in fiduciary capacites as have the state banking departments in the Seventh District.

40 Federal Reserve Act, Section 11 K.
41 Federal Reserve Board, op.cit. 1933, p. 359.

Table 24.

COMPARISON OF AVERAGE CAPITAL OF STATE AND NATIONAL BANKS EXERCISING FIDUCIARY POWERS. SEVENTH FEDERAL RESERVE DISTRICT*

	1919		1922	
	N	S	N	S
Illinois	$188,000	$203,000	$180,000	$487,000
Indiana	179,000	106,000	191,000	124.000
Iowa	102,000	181,000	109,000	211,900
Michigan	104,000	361,000	215,000	600,000
Wisconsin	265,000	196,000	271,000	197,000
	1929		**1933**	
	N	S	N	S
Illinois	$330,000	$486,000	$1,432,000	$491,000
Indiana	151,000	254,000	130,000	260,000
Iowa	119,000	150,000	169,000	150,000
Michigan	395,000	517,000	500,000	826,000
Wisconsin	247,000	298,000	290,000	256,000

* State bank averages were compiled from data in the reports of the banking departments of the various states. National bank averages were computed from data in the annual reports of the Federal Reserve Board and of the Comptroller of Currency.
State bank averages are mere estimates, great accuracy being impossible due to the difference status of trust companies and commercial banks in the various states. An attempt was made to have state bank figures comparable with national bank figures.

Membership Maintenance and Promotion

To maintain good will among member banks in the seventh District, a member bank relations department employing three field men was maintained at the Chicago Bank until 1928 when the department was eliminated and only one field representative was appointed to work under the direction of an Assistant Federal Reserve Agent.[42] This curtailment of member bank relations activities, in view of the original attitude of indifference toward the System on the part of state banks, was unfortunate. Since national banks were required to become members of the Reserve System and state banks were permitted on a voluntary basis, the special field for member bank relations as well as for membership promotion, would seem to have been logically among state banks.

Although the initial state bank membership was small and although the Seventh District is predominantly state bank territory, apparently the field representatives of the Chicago Bank were not particularly successful for very few non-members were per-

[42] Interview with Mr. Paul R. Winegardner, former field representative of the Federal Reserve Bank of Chicago.

suaded to join the System. On the contrary, although there was considerable interest in joining the System, particularly among larger state banks of the Seventh District as compared to those in the New York District,[43] (one Seventh District state bank, the Central Trust Company, submitted its application for admission as soon as the District was organized), nevertheless after 1922, state bank membership has steadily declined. In 1922, 8.9% of all state banks in the District were members; in 1929 6.7% and in 1933 4.9% belonged to the System.

Other figures in connection with state bank membership do not show proportionate decline, however, indicating that those banks which did retain membership were the larger state banks. In 1922, 28.9% of Seventh District state bank capital belonged to state member banks; in 1929 and 1933 these figures had decreased, although not in proportion to decreases in number of members, to 28.8% and 22.1% respectively. The same trend occurred in re-

Table 25.

PERCENT OF STATE BANKS BELONGING TO FEDERAL RESERVE SYSTEM.
SEVENTH FEDERAL RESERVE DISTRICT.

	1922	1923	1924	1928	1929	1930	1931	1932	1933
Illinois	7.0	6.6	6.6	6.1	4.8	4.0	4.3	3.2	6.0
Indiana	2.7	2.7	2.2	2.2	2.2	1.8	2.0	2.1	0.9
Iowa	7.9	8.6	6.0	5.0	4.5	3.1	3.1	2.9	0.8
Michigan	28.4	29.0	25.8	25.6	25.5	17.2	22.1	21.3	19.6
Wisconsin	4.1	3.8	2.7	2.4	2.0	1.9	1.9	1.8	1.3

Table 26.

PERCENT: STATE MEMBER BANK TOTAL RESOURCES, OF ALL STATE BANK TOTAL RESOURCES.
SEVENTH FEDERAL RESERVE DISTRICT.

	1922	1923	1927	1928	1929	1930	1931	1932	1933
Illinois	42.9	49.1	53.6	50.6	53.5	57.5	60.2	64.6	46.7
Indiana	12.2	10.8	10.8	11.8	11.8	11.8	13.6	12.6	12.9
Iowa	17.3	16.0	17.3	16.7	15.1	13.8	13.0	7.9	14.6
Michigan	62.8	69.5	64.8	66.3	62.1	57.9	65.7	59.0	54.0
Wisconsin	25.1	24.9	20.8	13.4	13.3	14.9	15.2	14.2	14.2

43 Clark, L. E., "*Central Banking under the Federal Reserve System,*" p. 136.

Table 27.

PERCENT: STATE MEMBER BANK CAPITAL FUNDS OF ALL STATE BANK CAPITAL FUNDS.
SEVENTH FEDERAL RESERVE DISTRICT.

Capital

	1922	1923	1927	1928	1929	1930	1931	1932	1933
Illinois	40.0	38.9	39.8	40.8	44.6	49.3	53.9	61.5	42.2
Indiana	7.8	11.1	13.1	13.3	14.4	14.7	13.1	16.8	7.5
Iowa	16.3	17.7	15.4	14.2	13.7	12.2	13.0	8.6	11.4
Michigan	61.1	61.4	59.6	65.5	56.2	50.2	53.8	40.8	40.0
Wisconsin	19.5	17.0	11.8	10.6	14.4	13.8	14.5	10.1	9.8

Surplus

	1922	1923	1927	1928	1929	1930	1931	1932	1933
Illinois	60.1	51.4	58.9	64.3	48.9	60.7	65.9	75.1	53.1
Indiana	10.1	11.2	14.0	10.5	18.1	18.2	12.8	15.6	9.5
Iowa	29.3	28.4	18.6	17.8	10.9	14.3	14.7	9.0	10.9
Michigan	70.0	74.3	59.0	57.7	63.2	66.2	46.8	47.8	60.0
Wisconsin	28.9	40.6	24.0	14.3	17.2	17.1	16.9	14.5	10.8

sources, 32.1% of whichc belonged to state member banks in 1922; in 1929 and 1933 the percentage had declined slightly to 31.1% and 28.5% respectively.[44] (see Tables 30 and 31.)

Active attempts towards increasing membership together with the encouragement given to banks which joined the System during the War caused Seventh District membership to increase between 1914 and 1922. After 1922, however, it declined gradually to 1929 and quite sharply between 1929 and 1933. Membership in New York, on the other hand, increased almost 50% between 1914 and 1929, and decreased only 12% from 1929 to 1933. At the present time membership in the New York District is almost twice that of the Chicago District.

The Chicago Bank began operation with 959 banks as members in 1914 and increased membership to 1444 by 1922. By 1929 a decrease of 15% had been experienced and by 1933 membership had fallen to 499, a decline of 65% from the 1922 peak. At the time of peak membership, 25% of the total membership was state banks.

Comparing 1922 membership with 1933 membership, the percentage of decline for state banks members and for national banks was 72.5% and 64.3% respectively.[45]

The trend of capital among Seventh District member banks

44 Computed from data published in the *Federal Reserve Bulletin* and data provided by the Statistical Department of the Reserve Bank of Chicago.
45 Computed from data published in *"Central Banking under the Federal Reserve System"* by L. E. Clark, pp. 158 and 159.

differed from the trend of membership. Whereas the number of members declined after 1922, capital continued to increase until 1930. Between 1914 and 1930 capital of member banks differed from the trend of membership. Whereas the number of members declined after 1922, capital continued to increase until 1930. Between 1914 and 1930 capital of member banks increased from $142,000,000 to over $413,000,000 an increase of 183%. This trend compared with the decrease in number of members indicates an increase in the average capital of member banks; in fact, between 1914 and 1930 the average capitalization of member banks increased from $148,000 to $364,000, and by 1933 increased to $464,000![46]

Table 28.

NUMBER OF STATE BANK MEMBERS AND TOTAL MEMBERS SEVENTH FEDERAL RESERVE DISTRICT

	1914	1919	1922	1923	1925	1927
State	1	326	375	369	347	308
Total	959	1351	1444	1440	1405	1308
	1928	1929	1930	1931	1932	1933
State	290	256	220	200	156	103
Total	1264	1229	1135	1009	829	499

Table 29.

TOTAL RESOURCES OF STATE BANK MEMBERS AND ALL MEMBERS SEVENTH FEDERAL RESERVE DISTRICT

(As of June each year) (000 omitted)

	1914	1919	1922
State	64,743	1,785,182	1,811,913
Total	1,415,094	4,741,706	4,503,321
	1923	1925	1927
State	2,117,333	2,920,278	3,487,075
Total	4,893,755	5,826,115	6,762,715

TABLE 29—Continued on Page 66

46 Comparative average capital of national banks and state bank members:

	State Member Banks	*National Banks*
1922	$112,000	$270,000
1930	198,000	699,000
1933	331,000	500,000

TABLE 29—Continued From Page 65

	1928	1929	1930
State	3,319,245	3,289,056	3,037,846
Total	5,930,146	6,515,975	6,355,080
	1931	1932	1933
State	2,784,175	1,742,399	712,536
Total	5,854,815	4,360,833	3,380,014

Table 30.

CAPITAL OF STATE MEMBER BANKS
AND ALL MEMBER BANKS

(As of June each year) (000 omitted)

	1914	1919	1922
State	6,000	149,408	102,749
Total	142,792	209,084	274,870
	1923	1925	1927
State	112,887	105,240	132,426
Total	287,035	288,776	322,913
	1928	1929	1930
State	132,036	178,807	212,266
Total	333,849	368,972	413,171
	1931	1932	1933
State	159,636	132,841	34,174
Total	337,441	293,236	231,503

The growth of member bank surplus and undivided profits followed a trend similar to that of capital although the peak was reached in 1929 in the case of surplus, and in 1928 in the case of undivided profits. Between 1914 and 1929 surplus of member banks increased 232% and undivided profits, 50%. By 1933, surplus had declined 64% and undivided profits 57%. During this period, the surplus of national banks decreased while that of state member banks increased.[47]

The trend of deposits and loans and discounts of member banks

47 Ratio of state member and national bank surplus to capital:

	State Member Banks	*National Banks*
1914	17%	68%
1930	91%	78%
1933	81%	50%

was similar to that of capital, with a marked increase from 1914 to 1940; deposits increased 19% and loans and discounts, 49%. Between 1930 and 1933 the decline in deposits amounted to 35% and of loans and discounts, to 81%. Throughout the entire period state banks never held over 50% of the deposits of all member banks, nor until 1929 did they make more than 50% of loans and discounts. From 1929 to 1931, however, state members made approximately two-thirds of the total member bank investments; in 1932 and 1933 their share again fell below one-half.

Between 1932 and 1929 state member banks expanded their loans from $0.731 for every dollar on deposit to $0.84, where as national banks' Loans decreased from $0.84 for every dollar on deposit in 1922 to $0.70 in 1929. After the crash of 1929 state banks were more successful in liquidating loans for in 1933 they were loaning $0.39 for every dollar deposited whereas national banks were loaning $0.45.

Among the various states represented in the Seventh District, Michigan's state banks supported the Reserve System more thoroughly than state banks in any other state. Nearly one-fourth of Michigan state banks on the average have been members of the Reserve System while in other states of the District less than 10% became members. The number of state members in Michigan

Table 31.

SURPLUS OF STATE BANK MEMBERS AND ALL MEMBERS SEVENTH FEDERAL RESERVE DISTRICT

(As of June each year) (000 omitted)

	1914	1919	1922
State	1,000	73,311	87,567
Total	95,506	173,852	198,597
	1923	1925	1927
State	88,547	113,043	133,640
Total	204,893	226,054	257,084
	1928	1929	1930
State	132,711	187,571	143,020
Total	272,506	316,822	280,086
	1931	1932	1933
State	153,199	113,329	27,694
Total	270,574	233,632	112,402

Table 32.

DEPOSITS OF STATE BANK MEMBERS AND ALL MEMBER BANKS
FEDERAL RESERVE DISTRICT NO. 7

(As of June each year) (000 omitted)

	1919	1922	1923	1925
State	1,490,057	1,512,870	2,152,366	2,220,178
Total	3,686,010	3,589,438	4,375,434	4,873,892

	1927	1928	1929	1930
State	2,358,485	2,315,449	2,443,700	1,636,037
Total	5,090,628	5,292,583	4,083,636	4,383,283

	1931	1932	1933
State	2,280,063	1,320,459	614,906
Total	4,843,806	3,468,649	2,852,128

Table 33.

LOANS AND DISCOUNTS, STATE BANK MEMBERS AND ALL MEMBER BANKS

(As of June each year) (000 omitted)

	1919	1922	1923	1925
State	1,104,855	1,109,605	1,212,122	1,673,841
Total	2,677,527	2,869,333	2,850,946	3,307,882

	1927	1928	1929	1930
State	1,690,523	1,995,099	2,052,747	2,134,520
Total	3,505,120	4,020,127	3,908,687	3,990,599

	1931	1932	1933
State	1,516,899	898,866	241,598
Total	3,025,236	2,121,040	1,264,690

Table 34.

PERCENT OF MEMBERSHIP COMPOSED OF STATE BANKS

	1922	1923	1927	1928	1929	1930	1031	1932	1933
Illinois	17.8	17.0	17.2	16.0	13.1	11.0	11.0	10.2	18.2
Indiana	9.0	9.0	7.9	7.6	8.0	7.0	6.1	7.2	16.0
Iowa	23.3	23.2	18.5	16.2	14.8	12.2	13.1	11.3	8.6
Michigan	65.0	65.4	60.7	60.7	60.0	60.0	60.0	60.0	57.7
Wisconsin	18.9	18.3	13.3	12.1	9.9	9.3	9.6	9.5	10.4

Table 35.

PERCENT: STATE BANK MEMBERS CAPITAL, OF CAPITALIZATION OF ALL MEMBERS SEVENTH FEDERAL RESERVE DISTRICT

	1922	1923	1927	1928	1929	1930	1031	1932	1933
Illinois	38.3	37.2	39.0	39.0	54.1	53.5	57.1	64.2	15.5
Indiana	10.7	15.0	16.1	16.1	16.6	16.3	14.0	17.4	13.9
Iowa	26.0	27.4	23.0	25.1	25.0	21.1	21.1	14.4	23.1
Michigan	64.3	66.0	76.3	73.2	65.0	61.1	60.2	30.1	30.2
Wisconsin	19.6	19.0	14.5	11.8	12.3	12.2	12.4	9.9	29.0

Table 36.

PERCENT: STATE MEMBER BANKS' RESOURCES OF TOTAL MEMBER BANK RESOURCES SEVENTH FEDERAL RESERVE DISTRICT

	1922	1923	1924	1928	1929	1930	1931	1932	1933
Illinois	41.5	40.7	43.3	41.1	52.9	53.3	53.8	60.5	14.8
Indiana	10.3	14.2	16.6	16.5	16.4	15.9	13.5	15.0	15.1
Iowa	24.3	26.4	23.7	22.7	20.7	20.9	23.0	12.7	22.5
Michigan	65.6	68.1	68.8	98.0	95.6	64.7	63.7	35.6	41.5
Wisconsin	25.0	25.3	21.4	13.4	13.3	13.3	13.0	11.8	12.4

Table 37.

PERCENT: DEPOSITS HELD BY STATE BANK MEMBERS, OF TOTAL MEMBER BANK DEPOSITS. SEVENTH FEDERAL RESERVE DISTRICT

	1922	1923	1927	1928	1929	1930	1031	1932	1933
Illinois	41.9	41.0	44.0	41.2	51.1	51.1	45.2	58.6	13.6
Indiana	15.7	15.7	13.8	16.2	16.3	15.3	19.4	15.1	15.9
Iowa	24.9	26.6	26.8	23.3	21.0	21.5	21.4	13.2	25.5
Michigan	66.1	68.8	70.0	68.0	66.3	65.8	60.0	34.3	40.3
Wisconsin	26.5	27.1	22.3	13.0	13.6	14.0	10.3	9.0	9.4

Table 38.

PERCENT: LOANS AND DISCOUNTS MADE BY STATE BANK MEMBERS, OF THOSE MADE BY ALL MEMBERS.
SEVENTH FEDERAL RESERVE DISTRICT

	1922	1923	1927	1928	1929	1930	1031	1932	1933
Illinois	40.5	41.8	44.5	41.8	51.8	42.9	54.3	62.2	12.5
Indiana	11.9	15.1	16.7	15.8	16.4	16.0	14.0	16.0	15.0
Iowa	27.0	29.3	27.5	26.7	25.4	26.4	27.1	15.7	27.6
Michigan	67.8	67.6	71.0	68.0	66.5	66.7	66.9	26.3	45.4
Wisconsin	25.6	24.7	22.7	11.6	11.5	11.1	15.1	18.1	14.2

Table 39.

PERCENT: SURPLUS, STATE BANK MEMBERS, OF TOTAL SURPLUS.
SEVENTH FEDERAL RESERVE DISTRICT

	1922	1923	1927	1928	1929	1930	1031	1932	1933
Illinois	42.8	40.0	47.2	47.9	57.0	58.0	63.0	66.1	34.0
Indiana	10.6	12.7	18.4	18.8	20.8	19.5	15.9	17.8	18.7
Iowa	22.5	23.9	25.6	25.8	23.0	22.8	23.4	12.2	18.7
Michigan	72.3	71.1	72.8	68.3	66.2	67.2	62.1	30.2	55.8
Wisconsin	23.5	26.5	28.9	14.5	13.6	14.5	15.2	12.6	8.8

overshadowed the national banks between 1922 and 1933 when the former represented consistently over 50% of the total membership in the state. The number of Illinois state bank members has been relatively high, but has not rivaled that of Michigan. In Indiana, Iowa and Wisconsin, state banks have played a minor role in the System; only a few have been members and the tendency has been for this number to decline.

Although the numbers of state banks within the System has not been great in the Seventh District, in some states the state member banks possess large percentages of the banking resources. In Michigan the capital and capital funds of state banks has averaged between 50% and 60% of the entire banking capital, and in Illinois the state member bank share has been almost equally as great. In the three other states, however, although the capital of state bank members is relatively greater than the number of members, the total capital controlled by state members has been throughout the period less than 25% of the total membership capital of the respective states. The same is true of the distribution of total resources of members in the various states. In Michigan and Illinois state bank members on the average controlled approximately

50% of the member bank resources, while in the other three states represented within the District less than 25% on the average is controlled by state member banks.[48]

Conclusions in Regard to Member Bank Relations of The Federal Reserve Bank of Chicago.

On the whole, the Federal Reserve Agent and his Assistants have been only partially successful in their effort to guide the policy of member banks and increase the membership of the Chicago District. The examination division failed to coordinate the investment policies of national banks and state member banks, and along wth the majority of other examining agencies, did not succeed in preventing losses and failures. The relative ineffectiveness of the bank examinations division is not due, however, to the faults of the examinations themselves, but rather to the fact that too much was expected of the entire system; examinations of banks can at best only give indications of the results of banking policy and the policy itself is outside the responsibility of the bank examining division.

In granting fiduciary powers to national banks, the state bank standards of capitalization were not maintained. Not until 1930 were requirements of capital for national banks with trust powers placed on a par with those of state banks. This situation also is related to the basic structure and policy of the System, rather than indicating the fault of the control over granting fiduciary powers, for with the lack of unity in types of banks, it was necessary to permit national banks, particularly small ones, to compete with state banks and trust companies on an equal basis. In these cases, then, the granting of trust powers was the only means of maintaining the national charters.

Neither have the membership promotion activities of the Chicago Bank shown successful results. In general, only a small fraction of all state banks in the District have become members, although in the states of Illinois and Michigan a large percentage of state bank resources were represented in the System. It is unfortunate that the work of the staff of field representatives formerly maintained by the Chicago Bank have increasing need of an understanding of the Reserve System's operation and an adequate field staff from the Chicago Bank would find non-member bankers to be more interested listeners than they have been in the past.

[48] Computed from data provided by the Statistical Department of the Federal Reserve Bank of Chicago.

CHAPTER V.

FACILITATING SEVENTH DISTRICT BUSINESS

Although the Federal Reserve System grew out of agitation for currency reform, it was designed to moderize certain other antiquated banking practices as well. At the time of the passage of the Glass-Owen Bill in 1913, the transaction of the country's business was much impeded both by practises of the government and of bankers: The operation of the Independent Treasury System caused unpredictable fluctuations in the amount of money in circulation; and the free movement of funds between the several sections of the country was hampered because of the bankers' practice of making exchange charges. In order to remedy this situation, the Federal Reserve Act authorized the Secretary of the Treasury to require the Federal Reserve Banks to act as fiscal agents for the United States Government,[1] and opened the way for the establishment of a national check clearing and collection system by the Federal Reserve Board.[2]

THE CHICAGO FISCAL AGENCY

After 1846 the United States Government placed its funds in sub-treasuries established in conveniently located cities from which it made all of its disbursements, thus becoming, in effect, its own banker. The operation of this system of caring for government funds, which are generally large, gave rise to series disturbances in the money market. Since the collection and disbursement of funds occur at different periods,[3] money was alternately withdrawn from and returned to circulation, thereby causing periods of stress when there was a lack of currency and credit, followed by periods when there was a plethora of these media of exchange.

Efforts to improve this system resulted in the devolpment of the unfortunate practice of placing government funds in commercial banks upon the posting of adequate security by these banks. This practice had the beneficial effect of curtailing the withdrawal from use of funds and preserving them for the legitimate needs of trade and commerce. On the other hand, however, the Secretary of the Treasury was thereby given control of the money market for he could deposit and withdraw currency at will and had the right both to choose the depository banks and to determine the amounts to be placed with them. Since banking and politics proverbially do not mix, complaint soon arose that political motives swayed the

1 Section 15.
2 Sections 13 and 16.
3 Periods of tax paying from internal revenues, customs duties, etc., cannot correspond with periods of large disbursements such as payment of interest on the public debt and pension payments.

Secretary in his choice of the amount to be deposited with commercial banks as well as in his selection of these banks.

Some Secretaries of the Treasury endeavored to improve the situation by purchasing government bonds in the open market with surplus funds. By following this practice, government bonds were placed at a premium, thus causing a contraction of the currency since national banks were dependent upon government bonds as backing for their currency issues. On the whole, this policy was unwise because it tied note issue to the public debt with the result that anything which affected the one affected the other.

The remedy for this situation sought in the Federal Reserve Act looked toward the elimination of the entire sub-treasury system and the appointment of the Federal Reserve Banks as fiscal agents for the government. The substitution of the Reserve Banks for the sub-treasuries would take the government out of the banking business, would allow the receipt and disbursements of government funds to be carried on by the credit instruments and would remove the interference with the currency supply of the country. The transfer of the fiscal duties to the Reserve Banks solved the problem for after the Banks began to exercise some of these functions, the periodic decline in loans and discounts caused by the March and April decline in reserves, complently disappeared.[4]

The abolition of the sub-treasuries was not accomplished immediately upon passage of the Reserve Act. European War and various political considerations made the Secretary of the Treasury loath to abolish the old system and he did so only when forced by Congress to act.[5] Although the last vestigate of the Independent Treasury System did not disappear until 1920, the Chicago Federal Reserve Bank was appointed fiscal agent two years almost to a day after the date of its organization.[6] The shifting of business from the Chicago sub-treasury to the Reserve Bank caused no great inconvenience because the Chicago Bank had been performing many fiscal functions before the actual appointment was made.

No sooner had these many fiscal functions been assumeed by the Reserve System than the great task of financing the part of the United States in the Eureopan War arose.

WAR FINANCING

The War was financed mainly by the sale of two types of government securities; short term certificates of indebtedness and long term bonds. The short term notes were issued to care for government expenditures while the funds from issues of long term bonds were being made available. The burden of providing for

4 Derived from data published in the *Annual Report of the Comptroller of Currency*, 1905-1920.
5 Chapman, J. M., "*Fiscal Functions of the Federal Reserve Banks.*" pp. 69-70.
6 Federal Reserve Bank of Chicago, *Annual Report* 1916.

the sale and distribution of these securities fell on the Reserve Banks, the newly appointed fiscal agents of the Government. Before beginning these activities, a meeting of Reserve Bank Governors was called in Washington and general plans were laid for giving every inhabitant of every city, hamlet and rural area in the country an opportunity to purchase these notes and bonds. Upon the return of Governor McDougal of Chicago, a meeting of Chicago bankers was held and their aid and the aid of their employees in the distribution of these securities was asked.

An Executive Committee was organized with the Governor and Federal Reserve Agent as Chairman and Vice-Chairman, this chairmanship arrangement being alternated for each campaign. The best bond salesmen obtainable were employed and an office-to-office canvass made. In order to promote the campaigns, other committees were set up for carrying on publicity work and the Chicago Daily News set up a miniature newspaper staff which supplied bond news to all papers in the Seventh District[7]. As a result of this intensive campaign, approximately 4,000 banks subscribed for bonds of the first loan and the entire District over-subscribed its quota by approximately $80,000.000.[8]

The same committees promoted the campaign for the Second Liberty Loan although in this case counties were the units of organization, each county being divided into cities, towns and school districts. State advisory committees were also organized. Again the $400,000,000 quota was over-subscribed.[9] The Third and Fourth Liberty Loan campaigns were organized along the same lines and were just as successful. The Fifth, or Victory Loan campaign came after the close of the War when enthusiasm had become less heated; although this campaign was somewhat more difficult, the Seventh District again carried its quota.

A comparison of the results of the five campaigns shows that the number of subscribers increased up until the fifth loan. There were 600,000 subscribers for the first loan; $1,809,497 for the second; 3,535,792 for the third; and 4,241,703 for the fourth. For the fifth loan, however, the figure was 2,267,411. The average subscription per capita in the Seventh District also increased as the campaigns progressed, going from $26.79 for the first loan to $46.44 for the third loan and $73.88 for the fourth loan. During the first four campaigns, total subscriptions of the District amounted to over two billion dollars. If the Victory loan is included, the amount was over $2,700,000,000.[10]

It was a comparatively easy task to distribute these bonds

---

7 Interview with Mr. J. B. McDougal, former Governor of the Federal Reserve Bank of Chicago.
8 Federal Reserve Board, *Annual Report*, 1917, p. 445.
9 Houston, E. M. and Russell, Andrew, *"History of Banking In Illinois,"* p. 429.
10 Federal Reserve Board, op.cit., 1918 and 1919.

to the people of the district, but to persuade the bankers to absorb the certificates of indebtedness, issued in anticipation of each liberty loan to bridge the gap between the various issues, was a difficult matter. The prospective difficulty was recognized by the men in charge of the campaigns, and Governor McDougal attempted to get as strong a leader as possible for this activity. He first offered the position to Mr. J. B. Forgan, who declined it but suggested Mr. Melvin Traylor of the Livestock National Bank of Chicago. Mr. Traylor accepted the appointment and carried through the campaigns with such success that he gained the respect of all the Chicago bankers which resulted eventually in his leadership of middle eastern finance.[11]

The first three issues of Treasury Certificates were readily absorbed but when the fourth was offered in anticipation of the Fourth Liberty Loan, the bankers of the Seventh District rebelled on the grounds that the banks could not carry a larger burden. However, such was the leadership of Mr. Traylor that the allotment to the Seventh District was over-subscribed.[12] For the entire seven issues of certificates from 1917 to 1920, the Seventh District subscribed 115% of its assigned quota of nearly two billion dollars.[13]

It is evident then, that the Federal Reserve Bank of Chicago was quite successful in the completion of its first important task as fiscal agent for the United States Government.

OTHER SERVICES

Fortunately, such a task as financing a war was but a temporary fiscal duty of the Federal Reserve Bank. More important have been their routine services for the Governmnt. Upon the final abolition of the sub-treasuries of 1920, the Reserve Banks assumed performance of all the financial services of the Government of which there was nine in addition to the ones already being exercised.[14]

Even with these added duties, the work of the fiscal agency department of the Chicago Bank declined almost 50% after 1920. After 1923, however, its activity gradually increased until it has

11 Interview with Mr. J. B. McDougal.
12 Idem.
13 Houston and Russell, op.cit., p. 450.
14 Added fiscal duties of the Federal Reserve Banks:

1. Receipt of gold coin and standard silver dollars for exchange.
2. Receipt of currency, gold, and subsidiary and minor silver coins.
3. Cancellation and shipment to Washington of unfit currency.
4. Receipt of surplus deposits from U. S. depository banks.
5. Receipt of deposits of postal savings, post-office funds, money order funds and other government deposits.
6. Payment of U. S. Coupons.
7. Payments of checks and warrants drawn against the Treasury of the U. S.
8. Receipt of funds for transfer to other points through Federal Reserve Banks or branches.
9. The exchange of various forms and issues of money (Chapman, J. R., op.cit., p. 67)

reached almost war-time levels with the recent addition of several new duties, the most laborous of which is the exchange and redemption of government securities. From 1923 to 1926 the number of securities handled for exchange and redemption fluctuated between 500,000 and 800,000: in the latter year, 693,515 pieces were exchanged with a value of $342,451,000.00 As compared with 1921, these figures show that a greater number of pieces were being handled for exchange and the average value of the pieces was larger.[15]

In 1928, the first year for which complete figures were reported, total receipts and deliveries of securities amounted to $1,000,000,000; in 1929, the figure was $1,240,578,000. The number of pieces redeemed in 1929 was 3,548,134, with a value of $64,083, 863.[16]. From 1929 to 1931, the number of pieces handled for exchange steadily increased, reaching a peak in the latter year at 318,829; 1931 was also the peak year for amounts, the value of the securities being $1,189,208,600. In 1933, the number of pieces had increased 9% and the value of the Exchange, 5%.[17] The number of pieces redeemed between 1928 and 1833 reached a peak in 1933 during which year over a billion dollars' worth were redeemed by the fiscal agency of the Chicago Bank. The number of pieces was 228,383, an increase of 320% over 1932's figure.[18]

In addition to caring for exchanges and redemption of government securities, the fiscal agency also handles the new issues. More subscriptions for new government bonds were received by the Chicago Bank in 1933 than in any year since the war, namely 22,052. In value, however, these subscriptions which amounted to over three billion dollars, showed a decrease of 12½% from 1932. In keeping with the increased subscriptions, the number of pieces delivered and their value increased. On th whole in 1933, the fiscal agency at Chicago handled over 700,000 pieces with a value of over $3,500,000,000, the dollar value being an increase of more than 45% over the previous year's figure. 1933 was the largest year in the handling of new issues in the period between 1928 and 1933.[19]

The fiscal duties of the Cash Department of the Chicago Reserve Bank increased considerably after the abolition of the sub-treasuries: these duties are receiving and shipping currency and coins, and sorting out the unfit currency. Before 1920 the Reserve Banks did very little of this type of work,[20] but in 1921, the Cash Department made over 67,000 shipments of currency amounting to over $125,000,000. Over $8,000,000,000 in currency was

15 Computed from *Annual Report* of the Reserve Bank of Chicago, 1922-1926.
16 Ibid., 1926-1929.
17 Ibid., 1929-1933.
18 Idem.
19 Ibid., 1928-1933
20 Ibid., 1920.

received and over $1,000,000,000 paid out. During this year, also, there was an unusually large accumulation of small coins, about $3,000,000 worth, which in 1922, however, was decidely reduced.[21] From 1922 to 1924 shipments of currency to banks increased while receipts and payments of paper currency declined somewhat. 1924 was the year of least activity in the receipt and payment of currency, but after that year and until 1929, the amount received and paid increased. Payments of currency were less in 1930 than in 1929, but increased again in 1931 about 12%; in 1932, the decrease was approximately 12%. In 1933, $2,300,000,000 in currency payments represented an increase of 9% over the previous year. Currency received followed a slightly different course, reaching a peak in 1929 at $2,266,000,000, declining during the next three years and reaching a new peak in 1933 at $2,366,000,000.[22] 1929 was the year of the largest shipments of currency. From 46,000, the figure in that year, shipments declined to 30,379 in 1932, followed by a slight increase in 1933. Small coin shipments remained practically constant at 8,500 from 1931-1932, until 1933 when they increased to 9,000.[23].

The increased activity in the Cash Department in 1933 was due to the increased demand for gold and currency for hoarding in the early months of the year, followed by the forced return of this gold after the advent of the new administration on March 3. This resulted in $67,081,000 in gold being received in 1933 as compared with a little over $4,000,000 in 1932. During the first two months of 1933, over $39,000.000 in gold was paid out. Also, gold certificates paid in 1933 were less than in 1932, the respective amounts being $2,932,000 and $99,102.000.[24]

Few government deposits were made before the Reserve Banks' appointment as fiscal agents in 1916. In that year, the average monthly government deposits in the Chicago Bank were $2,778,000; in 1917 this was increased to $16,856,000. Following a decrease of $6,000,000, in 1918, the amount rose in 1919 to a monthly average on deposits of $17,000,000. Since that date the average has not been over $7,500,000, this being the average for 1933. There is no definite trend of government deposits, the average monthly amounts varying widely from year to year. In general, the average on deposit monthly has fluctuated between $2,500,000 and $4,000,000.[25]

Since 1932, many new duties have been given to the Reserve Banks as the government has expanded its relief and recovery activities. The R.F.C. Custody Department was organized as the result of the Government's request that the Reserve Banks care

21 Ibid., 1922-1924
22 Ibid., 1922-1933.
23 Ibid., 1929-1933.
24 Federal Reserve Bank of Chicago *Annual Report,* 1933, p. 17.
25 Idem.

for the securities which the Reconstruction Finance Corporation received as collateral on loans made in the respective districts. In 1932, the first year in which the Chicago Bank operated as fiscal agent for the account of the R.F.C., 2,803 loans were made to 1,839 borrowers, totaling over $240,000,000; nearly $50,000,000 of this was repaid during the year. In 1933 this new department made 836 advances amounting to $374,459,699, of which $131,-244,825 was repaid in that year. The Treasury Department also has asked the Federal Reserve Banks to perform fiscal functions for the following newly created agencies: (1) Federal Emergency Administration of Public Works; (2) Farm Credit Administration; (3) Homeowners Loan Corporation; (4) Bureau of Public Roads.

RELATIONS WITH TREASURY

Since the Federal Reserve Bank of New York has apparently become the special agent of the United States Government, relations between the Treasury and the Federal Reserve Bank of Chicago have been not those of initiating policy but rather those of caring for routine matters of Government business.[26]

Because the danger of disturbance of the money market during tax paying time still exists to some extent, the Treasury issues to the New York Reserve Bank, one-day certificates of indebtedness which are sold to member banks having large excess reserve balances to prevent the use of these funds in the money market and to provide the Government with funds until taxpayers' checks are collected.[27] These operations are not shared by the Chicago Reserve Bank, however.

SERVICES TO MEMBER BANKS.

The Chicago Federal Reserve Bank and the whole Reserve System aid business not only by caring for the Government's finances in such a way as not to disturb the money markets unduly, but also more directly by enabling commercial banks to speed up the business of their customers. This service is mainly rendered by the operation of a check-clearing and collection system and a transfer system. Of less importance but of considerable benefit, also, is the safe-keeping service offered to member banks.

INTRA-DISTRICT CLEARANCE AND COLLECTION OF CHECKS

Provisions for a nation-wide clearance and collection system of checks were made in Sections 16 and 13 of the Federal Reserve Act. Section 16 provided for both inter-district and intra-district clearings, authorizing the Federal Reserve Board either to act as a clearing-house or to designate one of the Reserve Banks to

26 Clark. L. E. *"Central Banking under the Federal Reserve System,"* p. 214.
27 The Treasury is usually short of funds for a brief period due to the time and labor necessary to collect tax checks, while the member banks have large excess reserve balances until the time that the checks are collected.

assume this function. This provision also allowed member banks and Federal Reserve Banks to charge for their services, the charges to be fixed by the Board. Section 13 described the character of the items to be handled by the Reserve Banks, particularly items to be received on deposit, and seemed to indicate a clearing and collection system for member banks. Although these provosions were obscure if not contradictory, Section 13 being permissive and Section 16 being both permissive and mandatory.[28] because of the great need for a uniform method of clearance and collection of checks, a system was set up soon after the Reserve Banks were organized.[29].

Earliest systems:

On October 17, 1914, the Federal Reserve Board issued a circular outlining the problem of check clearance and urging the various Reserve Banks to establish a partial system as soon after opening as would seem feasible. The circular also defined the relationship of Reserve Banks with their members both outside and within the Reserve City, laid down regulations and procedures, and suggested forms and accounting systems.[30]

Four Reserve Banks made a beginning before the organization of the voluntary system in 1915.[31] The Boston, St. Louis, and Kansas City banks began organizing their clearance system for operation when the banks opened, and the Chicago Bank began a system a short time later. Boston had the country clearance system of New England as a basis for its system, while St. Louis and Kansas City applied a complete system of compulsory clearing which operated with considerable success.[32]

On December 16, 1914, the Chicago Reserve Bank began to accept items on all Federal Reserve Banks for immediate credit. From that date to June 10, 1915, there was an average of 1,665 items per month cleared, with an average amount of $3,260.000.[33] The Chicago Bank installed a system of clearing for member banks in the city of Chicago on November 16, 1915. From this date to December 4, 1915, only items on city member banks were received. During this period, seven items amounting to $125,000 were received.[34] On December 4, 1915, all items drawn on member banks

---

28 Spahr. W. E. *"Clearance and Collection of Checks."* p. 164.

29 Prior to the passage of the Federal Reserve Act, business was greatly hampered by the practise of making exchange charges on checks. These charges formed an important source of revenue for smaller banks, the charges in many cases being absorbed by large city banks. In other cases, the larger business houses paid the charges. In order to avoid such payments, checks followed many indirect routes while traveling between various cities. The classic example is that of a check on a Birmingham Bank given in North Birmingham, four miles distant: it traveled 4,000 miles before it reached Birmingham, and then being "bad", had to return over the same route.

30 Federal Reserve Board Annual Report, 1914, p. 119.

31 Spahr lists three banks as making a beginning of a clearing system. However, the Reserve Bank of Chicago also inaugurated a system at this time.

32 Spahr, W. E., op.cit., p. 168.

33 Federal Reserve Board, op.cit., 1915, p. 286

34 Idem.

in the Seventh District were accepted for clearance, after which date until the establishment of the voluntary system, 793 items amounting to $820,000 were received from Chicago banks, and 2,262 items totaling $640.000 from country banks.[35]

Voluntary system:

The next step in the establishment of an efficient clearing system was the institution of the voluntary intra-disrict system. The Board did not prescribe the details but required that each Reserve Bank organize a system in its own district on the voluntary plan.[36] The plan suggested by the Federal Reserve Bank was typical of that adopted by the majority of Reserve Banks.[37] Membership in the system was to be voluntary and items were received at par only from those banks in the district which agreed to remit at par. Items were immediately credited and debited to the accounts of the various banks on the par list, thus allowing the Reserve Bank to carry the float which at times was equal to almost half the deposits of the Reserve Banks. Each member bank was required to keep enough in its account over the required reserve to meet its checks without imapiring its reserve. Member banks could withdraw from or enter the system at any time or could be dropped from the system for a failure to observe the rules. No charges were made by the Reserve Bank, which acted only as an agent in collecting the checks with authority to send the checks direct to the bank on which they were drawn, if so desired.[38]

Under the voluntary system, the number of banks on the par list varied between 111 and 121. From January, 1916, until June, when the compulsory system went into effect, there were 114 members,[39] only a small percentage of the 5,000 odd banks in the district. During the year of operation of the voluntary system, there were on the average 8,900 items handled per month, at an average amount of $5,400,000.[40]

The voluntary system was not a success because of several weaknesses in the plan. The practice of giving immediate credit for items received gave rise to many overdrafts on the part of member banks, as each bank could not foresee how many items would be charged against it each day. This put an unreasonable burden on the Reserve Bank, and in the case of a bankruptcy, the Federal Reserve Bank suffered the loss. Another weakness of the system lay in the fact that reserves had not yet been central-

35 Idem.
36 Federal Reserve Bank of Chicago *Annual Report* 1916, p. 9 went into effect about a month before the voluntary system for member banks, Cf. Spahr, p. 171.
37 Spahr, W. E., op.cit., p. 172.
38 Material for this description obtained from *"The Collection and Clearance of Checks,"* W. E. Spahr, p. 172, and from an interview with Mr. C. R. McKay, Deputy Governor of the Federal Reserve Bank of Chicago.
39 Compiled from the Federal Reserve Bulletin, 1915.
40 Computed from data published in the Annual Report of the Federal Reserve Board, 1915 and 1916.

ized. In most cities, reserves were still maintained in the form of bank balances in order to provide for exchange and collection in correspondent banks; some such device as this was necessary for the many non-members of the system for collection.[41]

Spahr lists four additional reasons for the failure of banks to join the system:

1. Membership obliged many banks to carry larger reserves.
2. Membership involved a loss of exchange charges.
3. Since the system was voluntary and only a few banks joined, these banks suffered a hardship in comparision with the others.
4. The Reserve Bank had the power to charge to a bank's account a check which had not been approved prior to that time.[42]

Compulsory system:

The voluntary system was followed for only a year and in July, 1916, a compulsory plan was substituted which provided that all member banks become members also of the par clearance system. The detailed working out of the scheme was again left to the several Reserve Banks; as a result there was some variation in particulars of the system although in general uniform practices were followed.[43]

Under the new plan each Federal Reserve Bank was required to receive at par from member banks checks drawn on all member banks and checks drawn on non-member banks when such checks could be collected at par. The same principle applied to checks from member and non-member banks in other districts. In order to give publicity to the banks clearing at par, a list of non-member banks belonging to the clearance system was prepared, revised from time to time, and widely distributed. The member banks were not required to send all their checks through the Reserve Banks but they were required to pay at par checks drawn on themselves and presented by their Reserve Bank. Remittance of checks by mail was to be considered the same as presentation over the counter. The expense of the operation of the system was to be assumed by the Reserve Banks, thus depriving banks of their chief reason for making exchange charges.[44]

The permanent plan differed in an important way from the voluntary plan in the one respect that immediate credit was not given for checks. Checks were to be forwarded immediately, but entry was not to be made on the books of the bank until sufficient

41 Spahr, W. E., op.cit., p. 175.
42 Ibid., p. 176.
43 Interview with Mr. C. R. McKay, Deputy Governor, Federal Reserve Bank of Chicago.
44 Spahr, W. E., op.cit., p. 178.

time had elapsed within which to receive advice of payment. In the case of collection items, entry was made immediately on the books of the Reserve Bank, subject to final payment, but proceeds were not to be counted as part of minimum reserve and were not to be available for checking until actual payment of checks was made.[45] Each member bank was provided with a time schedule by which to calculate the period required for collecting its items sent to the Reserve Bank. Each Reserve Bank had developed its own time schedule, basing the calculation on the average time required to send items and receive remittances, plus the one-way mail time from its branches. In addition on inter-schedule for collection of items outside the district was developed and distributed which was based on the average one-way mail-time between Reserve Banks in various territories. Although this plan removed "Float" to a great extent, since calculations were based on average time estimates, some "Float" was bound to result.[46] The time schedule allowed one or two days for advice to arrive from most parts of the country at Chicago, although for the southern and western districts two or three days are required.[47] Another time schedule, a much simpler one, was used for transactions between branches of Reserve Banks and parent banks.

The Par List:

In order to make the clearing system more effective it was necessary to amend the original provisions of the Federal Reserve Act. These amendments were made by Congress in 1916 and 1917. Section 13 of the Reserve Act as originally passed had not provided for the entrance into the clearing system of non-member banks, but this was amended September 7, 1916, to permit Reserve Banks to receive items from such banks. On June 21, 1917, non-members were given other privileges of the par collection system by a further amendment of Section 13 which allowed non-members to collect from the Reserve Banks.[48] Since reserves were not sufficiently concentrated to make a clearing system completely affective, on June 17, 1917, Section 19 of the Reserve Act was amended to lower the amount of reserve originally required and to concentrate these reserves in the reserve cities.

At the outset, several large non-member banks opened clearing accounts but the majority of non-members were content to make free use of the system through their correspondents. In January, 1918, over 3,300 banks appeared on the par list. By June the number had increased to 3,900, of which approximately

---

45 Ibid., p. 179.
46 Ibid., p. 180.
47 Time Schedule, Federal Bank of Chicago, 1929.
48 Spahr, W. E., op.cit., pp. 196 and 197.

two-thirds were non-member banks. By December, 1919, the number had increased to over 5,000 and the following year increases continued until December there were over 5,600 banks on the list. 1921 was the first year subsequent to the inauguration of the compulsory system in which the number of banks on the par list did not increase. There were small increases in 1922 until by June every bank in the district was on the par list.

In 1924 the total number of banks in the district began to decline which involved also a decline in banks remitting at par. By 1927 the number of banks in the district had declined over 200, with a more than corresponding decrease in par list banks, although over 95%, of non-members still remained on the list.[49] Between 1927 and 1929 the number of banks had declined about another 200, and the percentage of non-member banks on the par list at the end of that period stood at 91½[50].

In June, 1930, 4,448 banks were remitting at par, 1,135 being members and 3,313 non-members. This number represented 91% of all state banks in the district. However, in 1932, the percentage of state banks on the par list declined to 89% and the total number of banks remitting at par had declined approximately 30% from the 1929 level. In June, 1933, 91% of all state banks were again on the par list although the total number of banks had greatly decreased. In December, 1933, the number of par remitting banks reached the lowest level in the history of the compulsory system, namely, 2,678, although the percentage remitting at par remained practically the same.[51]

On the whole, since the inauguration of the compulsory system, the large majority of banks in the Seventh District have remitted at par; all member banks were compelled to be on the par list and generally over 90% of state non-members also appeared there.

In 1918, the first full year of operation of the compulsory system, over 14,000,000 checks were cleared with a total of over $9,000,000,000. From this date until 1929, the number of checks handled increased over 65%, and the total amounts in dollars, over 25%. Beginning in 1930, however, both the number and value of pieces began to decline until in 1933, the number of pieces was 70.6% of the 1929 figure, and the decrease in value from the same year, amounted to 45.6%.

Opposition by non-member banks:

The growth of the check collection system was phenomenal. At one time the system included most of the banks in the United States; in 1921 all but 1,755 of the 30,523 banks in the country

---

49 Computed from data published in the Federal Reserve Bulletin, and material given in Chapter VI above.
50 Idem.
51 Compiled from the Annual Reports of the Federal Reserve Board.

were on the par list. Beginning in 1921, however, the numbers of opposing banks began to increase and a more effective opposition was organized which eventually took shape in the National and State Bankers Protective Association.

This organization was an off-shoot of the American Bankers Association and almost caused a split in that organization between country and city bankers. The objects of the new association were endorsed by a number of state organizations throughout the country. although in the Seventh District the Wisconsin organization was the only one to give such endorsement. The bulk of membership in the opposing association was in the South and the West.[53] This association and many independent protesting banks conducted a campaign intended not only to hamper but to destroy the par collection system. Many methods were used, among them being "trick" endorsements of checks and appeals to state legislatures and to the courts.[54] As a result of these activities, the Board finally abandoned the attempt to force all banks into the system.[55]

Non-member bankers in the Seventh District took no active part in this organized opposition, although some of them were very reticent about allowing their banks to go on the par list. A few, of course, disliked the loss of exchange charges, but the majority accepted the par list as a matter of course. In general, the Chicago Reserve Bank used the same methods as other banks in trying to bring the laggards into the system, although the means employed were much more tactful than those of certain other banks. Only in extreme cases were checks collected over the counter, and then not in extraordinarly large amounts; in case this was necessary, the express company was used as the agent. In most cases, however, a few visits from the field representatives and an honest and clear presentation of the problem was sufficient inducement for joining the clearance system.[56]

The Chicago Reserve Bank, however, seems to have been rather lax about maintaining pleasant relationships after once established. In one case, in a two bank town, one bank agreed to remit at par, while the other refused. Finally the second bank began remitting at par, and the Reserve Bank dropped the first bank from its lists without explanation or reason. As the banking business was strongly competitive at that time in this locality, the first banker was quite offended by such action and has been an enemy of the entire Reserve System ever since.[57]. No other

---

52 Computed from data published in the Annual Reports of the Federal Reserve Board.
53 Spahr, W. E., op.cit., p. 251.
54 For a full discussion of the methods used, see *"Clearance and Collection of Checks"*, by W. E. Spahr, Chapter VII.
55 Spahr, W. E., op.cit., p. 288.
56 Interview with Mr. Paul R. Winegardner, formerly field representative of the Federal Reserve Bank of Chicago.
57 Interview with a Seventh District banker.

cases such as this have been found and in general it appears that the policy of the Chicago Bank has been to aid and encourage small banks in connection with clearance and collection.

As a result of the campaign of opposition to the compulsory plan, the non-member banks obtained their goal insofar as its not being mandatory for them to belong to the par list; so far as they were concerned, the clearing and collection system was voluntary. On the other hand, the Reserve Banks found that it was not necessary for a clearing and collection system to be forced on all banks; that they were not obliged to handle checks of non-par banks but that they could collect checks of such banks over the counter if they did not use coercion; and that they could not lawfully demand legal tender in payment if the state law superceded the common law in this respect. In case the Reserve Bank accepts payment in other than legal tender it is liable as an agent to the bank for which it makes the collection unless such bank specifically releases it from such responsibility.[58]

INTER-DISTRICT CLEARINGS

In the early days of the System, there was no definite plan of inter-district clearing except that each Reserve Bank had reciprocal accounts with the others, with the right of requiring the shipment of gold if necessary. By careful shifting of debts and credits, all balances were kept within reasonable limits. At this time, member banks were not encouraged to clear through the Reserve Bank although balances were built up in excess of the required reserve and used to some extent.[59] In order to facilitate the clearing process between Reserve Banks, the Gold Settlement Fund was developed.[60] Since the Federal Reserve Board had the legal right to establish a plan of clearance under Section 16 of the Reserve Act, after a study made by a special committee of the first Governors' Conference, the plan was adopted.[61]

This plan provided for a fund of gold to be established at Washington, to which all banks would subscribe. The original subscription was $1,000,000, this to be the minimum balance maintained. Any excess balance could be refunded to the Bank if so desired. The clearing was to be accomplished by crediting each Bank with the amount due it from the other Banks, and debiting the amount owed to the other Banks, by this means changing the ownership of gold in the fund but not physically transferring it from place to place. The original plan provided for weekly settlements, but on July 1, 1918, daily settlements were instituted.[62]

58 Spahr, W. E., op.cit., p. 288.
59 Spahr, W. E., op.cit., p. 292.
60 Ibid., p. 295.
61 Ibid., p. 296.
62 Ibid., p. 297.

This plan went into operation May 20, 1915. On the 19th, each Reserve Bank advised the settling agent by telegraph the amounts in even thousands due to other Banks at that date. The next day, the agent telegraphed to each Bank the amount of credits to its settling account. Each Reserve Bank was to remit through the nearest sub-treasury an amount sufficient to cover the debit balance, if any, and to establish a credit balance of at least one million dollars.[63]

In September, 1915, the Reserve Agents opened a fund similar to the Gold Settlement Fund but separate from it, in order to facilitate the transfer of gold to and from the agents and their respective Banks; the accounts of the two funds were to be kept by the same staff.[64]

In 1917, the first year for which data is available, the Federal Reserve Bank of Chicago cleared over $6,400,000,000 worth of checks through the Gold Settlement Fund. The amount increased year by year until 1923 when over $24,000,000,000 worth of checks went through the Fund. There was a slight decline in 1924, but from that year to 1930, the value of the checks cleared through the Fund continued to increase so that in 1930, over $41,000,000,000 in checks was cleared. By 1933, however, the amount had declined 49.7%.[65]

TRANSFERS

In the early days of the Reserve System, in order to meet the needs of a large number of banks which had obligations outside their own districts, two types of drafts were created, the Federal Reserve Exchange Draft, and the Federal Reserve Transfer Draft. The former draft was one drawn on any Reserve Bank and made payable only at the drawee bank. Originally the maximum amount of this type of draft was $250 but in 1918 the limit was raised to $5,000. When advice was received, the amount was charged to the member bank and placed in a special account. Very little use was made of this type of draft as the development of the telegraphic transfer made it much easier to send sums between banks without either expense or loss of time.[66] The other type of draft, the Federal Reserve Transfer Draft, was made payable at the Reserve Bank specified in the draft. The minimum set was $250, but generally the amounts were over $5,000. Advice was sent by mail by the drawer to the home Reserve Bank giving numbers and amounts, and a duplicate was sent to the Bank at which the draft was payable. On receipt of the advice, the home Reserve Bank charged the account of the member bank and telegraphed the same information to the Bank at which the draft

63 Ibid., p. 296.
64 Ibid., p. 300.
65 Records of the Gold Settlement Fund, Washington, D. C.
66 Willis and Steiner, *"Federal Reserve Banking Practice."* P. 108.

was payable. The use of this type of draft has also not been popular due to no doubt to the "red tape" necessary in making negotiations for its payment.

The development of the telegraphic transfer system during 1918 has practically eliminated the time element in transferring funds. Since these facilities are intended primarily for adjustment of balances between banks, usually only large sums are transferred. From time to time, however, member banks have used the leased wire system to transfer even small sums, although this practice has been discouraged.[67] After the introduction of the leased wire system in 1918, the Reserve Bank of Chicago set about discouraging the use of drafts and encouraging the use of the telegraphic transfer system. The purchasing rate on mail transfer was increased from 10c to 15c per thousand, and telegraphic transfers were made without cost. As a result, purchases of drafts dropped from $208,000,000 for July to $77,000,000 during August. For the remainder of that year, transfer by drafts averaged about $50,000,000 a month, and by telegraph, $200,000,000.[68] The amount of transfers continued to increase throughout 1920 and 1921, reaching $13,904,999.000 in 1923. From that year to 1930 the amount transferred continued to increase reaching a peak in 1930 when over thirty-five billion dollars were transferred. The number of transfers reached a peak of 355,,000 in 1929.[69] Since 1930, the number and amount of transfers have declined: in 1933 the number had declined 42% from 1930, and the amount, 61%.[70]

The clearing of transfers between banks takes place also through the Gold Settlement Fund. In 1917, the Chicago Bank transferred over $100,000,000 more than it received; in 1918 the situation was reversed and about $500,000,000 more was received than paid; in 1919 approximately $1,000,000,000 more was transferred than received. Between 1920 and 1924, more funds were transferred from Chicago than were received, by $300,000,000. Also from 1924 to 1930 more funds were transferred than were received. From 1930 to 1933, however, funds were sent in to Chicago in larger amounts than they were sent out. On the whole, throughout the entire period, the Chicago Bank transferred more funds than it received.[71]

SAFE-KEEPING SERVICES

The Federal Reserve Bank of Chicago combines the collateral and safe-keeping activities in one department which has custody of the collateral left with the Bank as securities for

---

67 Spahr, W. E., op.cit., p. 212.
68 Federal Reserve Board Annual Report 1918, p. 558.
69 Compiled from *Annual Reports* of Federal Reserve Board, 1919-1930.
70 Ibid., 1930-1933.
71 Compiled from the *Annual Report* of the Federal Reserve Board 1915-1933.

loans, and also offers safe-keeping facilities to its member banks for their investment. These services to member banks were first utilized for their investment in government bonds, but with the completion of the new vaults in the Chicago Bank in 1922, all other securities were accepted. In that year, 598 banks, or 40% of the total membership, made use of the safe-keeping facilities, the value of the securities held amounting to over $200,000,000. In 1923 there was a decline in the use of these facilities when only 35% of member banks took advantage of the safe-keeping services.

From 1923 to 1929 the number of banks keeping securities with the Chicago Reserve Bank increased, reaching a peak number of 789 in 1929. However, the value of the securities handled followed a different trend, falling 44% from 1927 to 1929. By 1933 the value of holdings had increased 77% due to the fact that funds were deposited by the Reconstruction Finance Corporation in Chicago Banks for the use of the Chicago Sanitary District.[72]

The number of pieces handled has had an entirely different trend from those exhibited by number of banks or value of securities, discussed above. From 1927 to 1929, the number of pieces declined 35%, increased 55% the following year, and then in 1931 and 1932, declined again reaching the lowest point since 1927, namely, 93,277 pieces. In 1933, however, the number of pieces increased 33% because of the business of the newly created government agencies.[73]

THE DETROIT BRANCH

The Federal Reserve Act permitted Reserve Banks to establish branches either at their own volition or at the request of the Reserve Board.[74] The Board had allowed two types of branches to be established; one type acts merely as a local office of the parent Bank exercising only those reserve bank functions specifically delegated to it; and another type which is more autonomous and exercises most of the functions of the parent bank. The Detroit Branch of the Chicago Reserve Bank as originally established was of the first type but later it was given a degree of autonomy sufficient to place it in the second class.[75]

A Branch bank was needed at Detroit, the second largest industrial area in the Seventh District, in order to facilitate the business both of that particular section and also of the entire district. The extensive Detroit area transacted a large business

72 Federal Reserve Bank of Chicago. *Annual Report*, 1933. p. 16.
73 Compiled from *Annual Report* of the Reserve Bank of Chicago, 1927-1933.
74 Federal Reserve Act. Section 3.
75 Willis and Steiner, *"Federal Reserve Banking Practice"*, p. 738.

with all sections of the country.[76] Since it was necessary to clear many checks, make all transfers and obtain all rediscounts from the Chicago Bank, unnecessary time was consumed in transacting business. Michigan bankers, realizing this need and motivated by local pride, held a meeting in Lansing in 1917 to arouse interest for a reserve bank branch in Detroit. In view of the evident advantages of the desired branch, on November 27, 1927, the Board of Directors of the Federal Reserve Bank of Chicago authorized its establishment.[78] It opened for business on November 18, 1918.[79]

As originally established, the most important function of the Detroit Branch was that of clearing checks and during the first year of its operation it cleared 33% of the total cleared by the parent bank. Since the branch appeared to be popular and its facilities widely used, in 1920 it was given permission to carry on central banking functions.[80] The Detroit Branch now carries the reserve accounts of its members, discounts eligible paper, and receives for credit on its own books, maturing bills, notes, coupons, acceptances and bill-of-lading drafts. In addition, it makes telegraphic transfers for members, and for clearing non-members, and participates directly in clearing through the Gold Settlement Fund. It provides minor services for member banks similar to those of the parent bank, such as safekeeping and the supplying of currency and coin. In its relation to the Government, it receives government deposits, sending them to Chicago or wherever directed, pays government checks and coupons and receives subscriptions for Treasury bills. However, it is not permitted to engage in open market operations.

The volume of business handled by the Detroit branch has more than justified its establishment. Since it has possessed autonomous powers, it has handled a large percent of the business of the parent bank: in 1920 it handled an amount equal to about 30% of the checks cleared through the Chicago Bank. Since that year, although the comparative importance of checks has declined, the branch has continued to clear large amount of checks: in 1925 an amount equal to 22% of the parent bank's clearings was handled; in 1929, 26%; in 1930, 23%; and in 1932, 14%.[81]

Although the volume of checks at the Detroit branch has decreased, another important item, rediscounts and loans, has increased in relation to the business of the parent bank. In 1920 the

---

76 Woodworth, H. G. *"The Detroit Money Market"*, Chapter II.
77 Federal Reserve Board *Annual Report* 1917, p. 437.
78 Idem.
79 Federal Reserve Board *Annual Report* 1918, p. 555.
80 Federal Reserve Board Annual Report, 1919, p. 23.
81 Computed from data published in the Annual Report of the Federal Reserve Board and of the Federal Reserve Bank of Chicago, 1919 to 1933.

Detroit branch made 20% of the discounts of the parent bank and since that time, on the average has made in increasing proportion of the entire rediscounts in the district. By 1929, 32% of all rediscounts and loans were made by the Detroit Branch; and in 1932, 34%.[82]

The Government business handled by the Detroit Branch has never been large in proportion to that of the parent bank. In 1923 approximately 1% of the fiscal agency operations in the Seventh District were handled in Detroit. By 1929 the amount had increase to about 3%, but in 1933 it declined again to 1%.[83] The situation is to be expected for in the field of fiscal affairs, branch banks are not customarily permitted to be autonomous but they merely care for the routine business of the Treasury in its restricted area.

The convenience of the Detroit Branch to Michigan bankers is attested by the fact that business equal to 30% of the discounts and loans of the parent bank passes through its organization. Before its establishment, clearance of checks, transfers, and loans and discounts, all had gone through Chicago involving a delay of at least one day and often two in transacting business by mail. Since business in an area contiguous to a reserve bank always has an advantage over that in areas farther away, the establishment of the Detroit Branch gave this advantage to the Detroit area by eliminating mail delays and permitting the direct contact of Detroit banks with the resources of the Chicago Reserve Bank. Thus banks and industry in Detroit were placed on practically the same basis as banks and industry in Chicago, and Seventh District business was by so much facilitated.

Proposed Indianapolis Branch

It has been a matter of civic aspiration in many prosperous cities to obtain a branch of a Reserve Bank although few overt efforts have been made towards this end. Although Des Moines, Iowa, at the time of the System's organization, desired a branch bank, no attempt was made by Des Moines or by any other cities to obtain a branch bank after the establishment of the one in Detroit, until 1923, Indianapolis made application.[84] The petition on behalf of the Chamber of Commerce and the business men of Indianapolis, set forth the advantages to be derived from a branch reserve bank in Indianapolis and showed that there was a separation of interest between Chicago and Indianapolis as there had been between Chicago and Detroit, and that consequently, the needs of the Indianapolis industrial area were not being adequately served by the

82 Idem.
83 Idem.
84 *Commercial and Financial Chronicle,* vol. 117, p. 2490.

existing arrangements. The petition also compared Indianapolis favorably with other locations of branch reserve banks, pointing out that Indianapolis was a large transportation center and that in some cases its trade and manufacturing was larger than that in other branch bank cities.[85] However the Board of Directors of the Federal Reserve Bank of Chicago refused to consider the petition, and since this attempt, no efforts have been made in the Seventh District to obtain reserve bank branches.

A branch in Indianapolis was not so necessary as one in Detroit. The Indianapolis industrial center was no more than half the size of that of Detroit and moreover, since Indianapolis served a large agricultural territory, large demands for credit were not apt to develop suddenly. Also, the distance from Indianapolis to Chicago was only half that from Detroit to Chicago, and four railroads offered frequent transportation service.[86] A branch would have speeded up business in Indianapolis, but it appears that the advantages would have been more purely local in nature than was the case in Detroit because of the smaller amount and the agricultural nature of industry in and around Indianapolis. In view of these facts, the Federal Reserve Bank of Chicago was justified in denying the petition. Such action was in keeping with the Federal Reserve Board to grant permission for the establishment of branches only where the advantages would obviously affect a large area.

Banking Quarters of the Federal Reserve Bank of Chicago.

During the first eight years of operation, the Federal Reserve Bank of Chicago had difficulty in obtaining adequate quarters in which to perform its functions of serving its members and facilitating Seventh District business. Until the erection of the new building in 1922, the offices of the Reserve Bank were widely scattered about the financial district of Chicago. On November 16, 1914, when the Bank opened for business, it occupied two floors of the Rector Building at Clark and Monroe Streets.[87] In 1918, it became necessary to double the space in the Rector Building and to occupy one entire floor in another office building as well as a large floor space in a third.[88] The Fiscal Agency Department was first housed in "The Rookery," was moved from there to the Kimball Building at Jackson and Wabash, and finally occupied two floors adjacent to the Rector Building. These early arrangements were inefficient and brought about many annoyances. In one building rats were so numerous as to interfere with work. In some cases, stenographers had to cross the street from one building and climb

85 Idem.
86 Since 1923, the Nickle Plate has discontinued passenger service between Indianapolis and Chicago.
87 Federal Reserve Board, *Annual Report* 1918.
88 Ibid., p. 560.

three flights of stairs in order to take dictation from a bank officer.[89] Such arrangements made adequate protection difficult. After the United States entered the War, the U. S. Secret Service unearthed a plot to dynamite the Reserve Bank and as a result, the guard was doubled, although the gold and securities were kept in the vaults of other Chicago banks.[90]

Seeing the need for a new building, the directors purchased a site with 165 feet frontage and a depth of 160 feet, located at the head of LaSalle Street directly opposite the Continental And Commercial National Bank.[91] The erection of the new building was delayed until after the end of the war and was not completed until 1922. The Federal Reserve Bank of Chicago occupied its new quarters as soon as possible after completion. The annual report to the Federal Reserve Board described this new building as a "notable piece of architecture,"[92] and attention was called to the "Corinthian colonnade surmounted by an attic" at the main entrance, forming a "porch of free standing columns."[93] Above the fifth story the architecture was of "office building type." The architectural motif was said to have been inspired by the best periods of Greek and Roman civilization, the result supposedly being a building in classic style freely interpreted to harmonize with modern conditions; the aim of the design was to produce an impression of dignity and strength.[94]

Within the building a large lobby on the first floor is joined by a broad dignified staircase to the Banking Department on the second floor. The second floor lobby is Doric in pattern and is three stories high. The whole is finished with a marble which is soft tan in color. In addition to the banking quarters and offices, the building contains assembly rooms, dining rooms, a gymnasium, a modern reference room and a general reading room.[95] The interior of the bank gives an impression of taste and restfulness and produces the feeling of strength and dignity which the external arhitecture also was intended to express. The tan marble has a pleasing effect resembling reflected sunlight.

The exterior of the building does not perhaps merit the same commendation. The description in the report to the Board is somewhat misleading in its inference of originality. The building looks to the casual observer as boxlike as most edifices erected for utility in a crowded district. The colonnade forming a porch for the front entrance appears more as an adornment than a structural

89 E. M. Houston and Andrew Russell, op.cit., p. 418.
90 Idem.
91 Federal Reserve Board, *Annual Report* 1918, p. 560.
92 Federal Reserve Board, *Annual Report,* 1922.
93 Idem.
94 Idem.
95 Idem.

necessity and its use is identical with that of the colonnade of the Continental Bank across the street. Even the huge conventionalized shells surmounting the portico are the same. The Federal Reserve colonnade would be a replica of that on the Continental Bank except that its orders are Corinthian rather than the Ionic of the Continental columns. The statement in the report concerning the combination of the best in Greek and Roman civilization, in general would be extravagant and in the case of the Federal Reserve Bank appears almost ridiculous. Since it is usually recognized that Roman architecture is derived Greek, one wonders why the two should be combined even it it were possible. However, the building itself quite effectively belies this portion of the report's description.

On the whole, it would seem that some architectural possibilities were overlooked in the designing of the exterior of the Chicago Reserve Bank. The close similarity of the facade with that of the Continental Bank is especially odd; here evidently is a neglicted piece of evidence for some politician's investigation of "money trust" influence.

The Chicago Bank was not alone in the erection of spacious and costly banking quarters: The Chicago Bank's total cost of $10,467,000 was exceeded only by the cast of the New York edifice, although Cleveland was not far short of $10,000,000. In fact, considering the cost of building alone, the Cleveland Bank cost approximately $1,000,000 more than the Chicago Bank, the higher total for Chicago arising from the fact that its site was $1,700,000 more costly than the site of the Cleveland Bank.[96] The machinery installed in the Cleveland Bank, also, cost $1,559,120 as compared with the figure for Chicago of $1,276,036.[97] If the value of the land is not taken into consideration, Chicago ranks third in cost in building and equipment, New York being first and Cleveland second.

The size and cost of these various Reserve Bank Buildings aroused a great deal of criticism throughout the country and became the subject of a Congressional investigation in the course of which the fact was emphasized that the buildings of the Reserve Banks at New York City, Boston, Cleveland and Chicago cost a total of $50,000,000 while the Houses of Parliament in London cost but $2,000,000 and the Capitol at Washington, $2,500,000.[98]

However, the critics of the Reserve Banks failed to take into account two facts: first, that if the Banks were to have ample facilities and to gain prestige, they must have spacious and magnifi-

---

[96] Federal Reserve Board, *Annual Report* 1933, p. 126.
[97] Idem.
[98] *Commercial and Financial Chronicle,* volume 114, p. 1723.

cent buildings; and second, that the Banks could afford all they spent.

The American tendency to admire and attribute success to any institution which puts up an impressive front made it more or less inevitable that the Reserve Banks would endeavor to give an outward appearance of prestige. Their buildings, therefore, would have to be at least as impressive as those of other banks, in their cities of location. The Chicago Bank's situation is a case in point: it was erected directly across the street from the largest bank in the Middle West, the Continental Illinois National Bank and Trust Company and in spite of the large amount spent on the Reserve Bank building, it is hardly equal in size and appearance to its neighbor across the street. Besides the practical advantage of having ample and comfortable quarters in which to operate, the necessity for creating public interest and goodwill probably justifies or at least makes understandable, the erection of the "palatial" buildings.

Criticism might have been justified in spite of the above considerations, had the Reserve Banks not been able to afford their new buildings. Although the earnings of the Federal Reserve Bank of Chicago have fluctuated widely throughout the period of its existence, at the time the new building was erected, the Bank could easily afford the expenditure. During the first two years of its existence, the Chicago Bank, like most of the other Banks in the System, barely made expenses and was unable to maintain dividend payments, but by 1917 it had been able to pay its dividends up to date. From that year to 1929, gross earnings were well over $5,000,000 per year.[99] 1921 and 1922, the years in which the new building was erected, were the most profitable years, gross earnings amounting to $30,000,000 and $20,000,000, respectively.[100] Net earnings for the period 1914 through 1933 amounted to over $82,000,000; $16,000,000 went to member banks as dividends; $40,000,000 was transferred to surplus; and $25,000,000 was paid to the Government as a franchise tax. In view of these figures, it is evident that the erection of a large building in the case of the Chicago Bank did not interfere with the Bank's meeting its obligations either to its stockholders or to its depositors nor with the payment of a large excess profits tax to the Government as a franchise tax.[101] The same general statement could be made in regard to other Reserve Banks.

Although for various reasons the Reserve Banks have not always been able to maintain their positions of esteem in their communities, the original acquisiton of public respect would have

---

99 Computed from *Annual Report* of the Federal Reserve Board, 1917-1929.
100 Federal Reserve Board, *Annual Report* 1921 and 1922.
101 Federal Reserve Board, *Annual Report* 1933, p. 126.

been much more difficult if their buildings had not compared favorably with those of their largest stockholders; since this public respect was ultimately in the interests of the successful operation of the System and since the Reserve Banks' earnings warranted the costliness of the buildings, it would seem that the expenditures did not deserve the criticism they received.

CHAPTER VI.

SEVENTH DISTRICT BUSINESS AND RESERVE POLICY

The Federal Reserve Act was passed in order to provide the country with a coordinated banking system and an elastic currency which under the old system did not exist. Before the passage of the Act, the commercial banks of the country had followed policies largely dictated by their own interests, there being no common agency possible. As a result, there was no control of gold movements, credit was comparatively inelastic and reserves were unavailable in times of emergency. Currency was supplied by the Federal Government and the national banks, but no attempt was made to tie the amount of issues to the needs of business; the Government issues depended on the deposit of gold and silver in the Treasury and the amount of national bank currency depended on the price of government bonds. Thus there was little elasticity in the amount of currency issued.

In order to remedy this situation, the Federal Reserve Act provided for the organization of a system of central banks, each serving a section of the country, which were to possess powers of supervision and regulation over the policies of banks in their respective sections in regard to both their local and their national significance. The system of regional banks was coordinated under the control of the Federal Reserve Board which was given broad powers of policy control.

In order that the regional banks might possess the power necessary to the fulfillment of their functions, they were given direct control of member banks and indirect control of the entire credit system. The powers of examination and supervision of member banks gave the regional banks the right to approve or disapprove the individual policies of each individual member bank, while the right of control over discounting and the power to engage in open market operations placed the regional banks in position to regulate the amount of funds available for the use of commercial banks in lending to their customers. It was hoped that the possession of these powers by a central banking system would eliminate most of the evils which existed before the passage of the Reserve Act.

The policies of the Federal Reserve Board and the Reserve Banks are ultimately determined within the limits prescribed by the credit base of the several Reserve Banks and the gold reserve.

THE CREDIT BASE OF THE RESERVE BANKS.

The credit base of the Reserve Banks is similar to the credit base of the commercial banks in that the amount of loans which may be made depends, in the case of both types of banks, on the amount of capital, surplus and deposits. The difference in the two types of banks lies in the fact that individual persons, corporations or estates own the capital and surplus and provide the deposits of commercial banks, whereas banks own the capital of Reserve Banks and provide most of the deposits and the surplus belongs, not to the stockholders, but to the Reserve Bank or ultimately to the Government.

When a commercial bank becomes a member of the Federal Reserve System, it is required to subscribe an amount equal to 6% of its capital and surplus to the capital of the Federal Reserve Bank of its district,[1] and to maintain a deposit at the Reserve Bank as its legal reserve equal to 3% against its time deposits and 7%, 10% or 13% against its demand deposits depending on its classification as a country, reserve city or central reserve city bank, against these reserves, the Reserve Bank in turn is required to keep a gold reserve of 35%.[2]

The surplus of Federal Reserve Banks, similar to that of commercial banks, is derived from earnings over and above expenses and dividend payments, but additions to surplus are more closely regulated in the case of Reserve Banks than in the case of commercial banks. Generally after a commercial bank has established a surplus equal to 20% of its capital, it may dispose of net earnings as it sees fit; but after the payment of the required cumulative 6% dividend to stockholding banks, Reserve Banks must place the remainder of its net earnings to the surplus account.[3]

Any factors tending to increase or decrease any or all of these component parts of the credit base, i.e. capital, surplus and deposits, would increase or decrease the ultimate amount of credit available to member banks. In general there are two groups of factors which affect the credit base of the Reserve Banks; first, those factors which are external to and beyond the control of the Banks, and second, those factors which are wholly or partially within the possibility of control by the Reserve Banks. In the first group are those factors which affect the prosperity of business and influence business habits

1 To the present time, one-half of the amount, or 3%, has been called, but member banks are subject to pay the rest upon demand. Originally these payments were required to be paid in gold but later either gold or lawful money was accepted.

2 Reserve deposits compose the bulk of deposits of the Federal Reserve Bank of Chicago. Government deposits vary widely but on the average are but a small percentage of reserve deposits. Deposits of foreign banks are a minor factor appearing only occasionally on the Bank's balance sheet. Two new classes of deposits, special deposits of member and non-member banks, have recently been created but the amounts held are not large.

and customs; in the second group are the factors controlling reserve membership and member bank reserve balances.

External Factors Influencing the Credit Base

Fluctuations in business activity, the causes of which are legion, bring about changes in the capital and reserve deposits and gold reserve of the Reserve Banks. When conditions are such as to cause commercial banks to take large losses on their investments, the capital and reserve deposits of the Reserve Banks will decline because many banks will be forced to close and the others will have their surplus greatly reduced. Since the capital of the Reserve Bank, an element in the credit base, is rependent upon the capital and surplus of member banks, any reduction in these latter items would on the whole reduce the capital of the Reserve Bank and thus reduce the credit base. If the loss of deposits due to failures is sufficient to affect reserve deposits, there is a further reduction in the credit base.

Other factors which influence the credit base and are not controllable by the Reserve System are those factors which influence business habits and customs. Business habits affect the Reserve System particularly through the demand for specie and currency. If the business community should insist on settling its debts with gold, the credit base of the Reserve Banks would be greatly reduced. If a panic develops, as it did in 1933, when people through fear demand gold, the base for credit is likewise reduced. If currency is acceptable in place of gold, the credit base is not directly affected, but the most efficient use of it is prevented because the Reserve Banks cannot expand currency as readily as credit. If borrowers from commercial banks are willing to take the proceeds of their borrowings in the form of deposits, the Reserve Banks can create $2,850 of credit for every $100 in reserve deposits on the basis of a 35% gold reserve, but if the habits of the business community are such that the borrowers demand currency instead of credit, the Reserve Banks can issue only $162 in currency for every $100 in reserve deposits.[4] Since the habits of the business community determine the medium for making exchanges, i.e., gold, currency or credit, it is upon these habits that efficient use of the Reserve Bank's credit base depends.

---

[3] Originally, the Federal Reserve Act provided that all of the earnings after payment of dividends should be placed to surplus account until the surplus was 40% of capital and after that point was reached, all excess earnings should accrue to the Government as a franchise tax. In 1919 these requirements were changed so that no franchise tax was paid until the surplus equalled 100% of capital, after which point, 90% of the following year's earnings was paid to the Government and 10% was added to surplus. The Banking Act of 1933 eliminated the franchise tax and allowed Reserve Banks to place all net earnings not required for dividend payments to be placed to surplus.

[4] Goldenweiser, E. A. *"Operation of the Federal Reserve System."* p. 21.

The prevalent custom in many banks of levying high service charges on a large number of customers encourages the use of currency and coin in business and discourages the use of credit instruments in completing transactions. If these prevailing practises are not checked, if and when business revives sufficiently to press the Reserve Banks for credit, the banking community may find that they have so ingrained the habit of using currency in the business world that the Reserve Banks will be prevented from making most efficient use of their credit base.

Similar in effect to the demand for specie and currency to carry on the normal transactions of business is the demand for and the supply of gold. When demand for gold either for export or domestic purposes exceeds the amount of gold flowing into the Reserve Banks, the amount of credit which a Reserve Bank can create is reduced; when the supply of gold exceeds demand, however, the ability to grant credit is increased. While changes in these gold movements could possibly be induced to Reserve System policy, in general they are of automatic character.

Changes in the demand for and supply of gold also affect reserve deposits. If gold should be demanded for shipment abroad to pay a private debt, the deposits of a commercial bank are reduced; if gold should be received from abroad, the deposits are increased. In this manner reserve deposits would also be decreased or increased and the credit base affected accordingly.

Since the United States has gone off the gold standard, a fact denied by some public officials, changes in the gold reserve are not important to the credit granting powers of the Reserve Banks because the reserve against deposits may now be composed of either gold or lawful money and that against Federal Reserve notes of either commercial paper or government bonds. Also the prohibition of the free movement of gold has rendered exportation of that metal an unimportant factor in the changes of the credit granting powers of the Reserve Banks.

Internal Factors Affecting the Credit Base.

Membership and resources of members affect the credit base of a Reserve Bank. If the membership of a Reserve Bank increases or decreases so as to affect the capital, surplus and deposits of the total membership, the capital and reserve deposits of the Reserve Bank are increased or decreased accordingly. Factors affecting membership may be classified in two groups: first, general business conditions, and second, the attitude of bankers towards the Reserve System. When business is active and the demand for credit is great, it may appear profitable to organize new banks, but whether or not these new banks become Reserve members de-

pends upon the reputation of the Reserve Bank of that district. This factor of reputation also influences already existing non-member banks. If the Reserve Bank has been clever in interesting and gaining the support of the bankers in its district, the capital and reserve deposits, and therefore the credit base, will be enlarged by increased membership, but if the Reserve Bank has allowed bankers of the district, both members and non-members, to become indifferent or actually hostile, the Reserve Bank is not making full use of its possibilities, and all possible credit is not made available. It is possible under such circumstances to have an increasing membership and decreasing capital and reserve deposits; or it is possible, as was the case in the Chicago District (Cf. Chapter III), to have a decreasing membership and increasing Reserve Bank resources when a changing banking structure brings the banks with largest capital into the System. Each Reserve Bank, then, has a duty, a duty, very poorly performed in some cases, to win to its membership all the banking resources of the district so as to give industry and commerce access to all possible credit.

More important than the winning of membership is the Reserve Bank's control over member bank reserve balances, the most important element in the credit base. The Reserve Bank influences this element by the use of three weapons: the rediscount rate, open market transactions in commercial paper and government bonds, and moral pressure or suasion. By the use of these weapons, a Reserve Bank is able to control, in some measure, the amount of reserve balances and therefore the amount of credit, and to influence to a small extent the direction of the use of credit.

When it becomes necessary for member banks to borrow from the Reserve Bank, either to maintain legal reserve, to secure gold for exportation, or to accomodate customers, the cost of such borrowing, determined by the discount rate, influences the price and therefore the volume of total bank credit available. If the discount rate is relatively high, borrowing is discouraged and member banks are reluctant to make loans except those which it can care for without borrowing from the Reserve Bank; but if discount rates are low, loans by member banks are encouraged because of the opportunity for a profit as well as a desire to accomodate customers. When borrowing is discouraged, the reduction of credit granted by the commercial banks causes a reduction in deposits and thus the credit base is lowered; but if borrowing is encouraged by a low rediscount rate, the effect is the reverse.

A Reserve Bank can affect member bank reserves to some extent, also, by engaging in buying and selling of acceptances and governmental securities. If a Reserve Bank has a policy of making such investments, the tendency is to increase member bank re-

serve accounts because of the increased credit "pumped" into the market and increasing member bank deposits. A sale of these securities has just the opposite effect. In general, Reserve Banks have made more use of transactions in government securities in attempting to influence member bank credit than they have of the power to buy and sell two name commercial paper.

The third weapon, that of bringing moral pressure to bear on member banks, appears in the attempts of Reserve Bank officers either to reduce the amount of loans to member banks, or by personal appeals and presentation of arguments to the loaning officers of borrowing members, to influence their use of loans. Such pressure was easily brought to bear when a member bank feared it would not be allowed to borrow in order to keep its reserve up to the legal level, since excess reserve were rarely maintained until recent years. Other types of pressure result from the force of personality and the forcefulness of arguments of Reserve Bank officers, the powers to examination and supervision, the power to limit borrowings for speculation. The limitations of pressure, however, are generally admitted: it is practically impossible to "ear-mark" credit as between different lines of industrial activity, although it is possible within very narrow limits, to direct the amount of credit being used for fixed capital, working capital and trade financing. Just insofar as this policy or moral suasion is successful in either increasing or reducing (usually the latter) the loans of member banks and the borrowing from the Reserve Banks, does it affect the reserve balances and thus the credit base.

The Credit Base of the Federal Reserve Bank of Chicago

The division of the country into twelve Federal Reserve Districts of varying industries and resources has resulted in unequal bases of credit for the twelve Federal Reserve Banks. The Federal Reserve Bank of New York has been by far the largest bank of the System since its organization; it has possessed on the average approximately 40% of the capital, 30% of the surplus and 45% of the deposits of the entire system. The Chicago Bank, the second largest of the System, has held approximately but 10% of the capital and 15% of the surplus and deposits.[5]

Since the organization of the System in 1914, the credit base of the Chicago Bank as well as that of the entire system, has increased. The trends shown by the elements of the credit base, i.e. capital, surplus and deposits, have not been exactly correlative although they have all shown an upward direction.

The trend of capital has differed somewhat from that of deposits and surplus. Capital of the Federal Reserve Bank of Chi-

[5] Computed from *Annual Report* of the Federal Reserve Board 1915-1933.

cago increased steadily from 1914 to 1930 mounting from $6,-644,000 to $20,208.000. After 1930, Capital declined to $13,-077,000, the 1922 level.

The surplus of the Chicago Bank has increased also, although not to the extent shown by capital. The years 1919-1920, and 1928-1929 were the years of largest additions to surplus; in the former group of years, $10,000,000 was added to surplus, and in the latter group, approximately $8,000,000. Smaller additions were made at other times so that in 1930 total surplus of the Chicago Bank was $40,000,000, or nearly twice the capital. During 1931 and 1932, the necessity of paying part of dividends from surplus caused a slight reduction, but by 1933 the $40,000,000 level was again reached.[6]

The growth of deposits, particularly member bank reserve deposits, has been enormous although they have been wide fluctuations. Deposits increased rapidly from the time of organization until the latter part of 1919 reaching $310,000,000, and then dropped precipitously during 1920 to $210,000,000. The following year they again increased, however, with fluctuations until by 1930 they reached $400,000,000, following which there was another sharp decline. Since 1930 there has been a further tremendous growth in deposits to a peak of $600,000,000, a more rapid increase than occurred even between 1914 and 1919. In these years, deposits increased to over nine times the 1914 figure within five years; between 1930 and 1933, deposits increased to $100,000,000 above the 1929 level or thirteen times the 1914 level.[7]

Changes in the credit bases of the Reserve Banks as a whole and of the Reserve Bank of Chicago have been reflected in the business activity both of the whole country and of the Seventh District; and also, in turn, changes in business activity have made themselves felt in the credit base. These mutual changes have not taken place automatically in many cases but have been the results, both direct and indirect, of the policies followed by those in charge of the Reserve System and of the several Banks, as well as of outside influences. Since the policies of the Chicago Bank have been changed from time to time in keeping with the effectiveness of these varying influences, the operation of the Bank in its relation to Seventh District Business has undergone many alterations. The operations of the Chicago Bank as characterized by these alterations, fall naturally into five distinct periods.

In the first period, 1914-17, the Reserve policy was influenced by difficulties of organization and by the great way in Europe. The second period, 1917-1918, includes the time of war activity in the

6 Idem.
7 Idem.

United States and the successful completion of this activity. The post mar period, the third period, extended from 1919 to 1924, and was marked by a post-war depression and the return of "normal" business activity. During the fourth period, 1924 to 1929, the country was relatively prosperous and business activity was generally at a high level, but in the final period, 1929-1933, this prosperity disappeared and one of the worst depressions in the history of the country developed.

THE PRE-WAR PERIOD — 1914-1917

The Federal Reserve System at the outset was faced with two difficult situations the incipient depression which developed in 1913 and the European War which began in the summer of 1914. The newly organized System, however, made little attempt to meet for the time being the problems arising out of these situations but was content with consolidating its technical organization. Consequently, no use was made of the weapons of control already in the hands of the System and neither was their use very clearly understood, especially the use of open market operations; consequently, changes in credit base were of no moment in the Federal Reserve policy.

The recovery of business from its state of stagnation during 1914 occurred, then, without any action on the part of the Reserve Banks. The lack of activity in the business world had resulted in financial stress so that several groups of banks had found it necessary either to take advantage of the provisions of the Aldrich-Vreeland Act, or to issue clearing house certificates.[8] Very soon, however, the flood of war orders from Europe began to tax the capacities of industrial plants and railroads of the country and in order to meet the influx of orders, new capital equipment was necessary. Such a trend of affairs brought activity once more to the heavy industries of the Seventh District, especially the steel industry. The improvement of these lines soon communicated itself to other lines, bringing to an end the depression of 1913.

The Seventh District Farmer, like the industrialist, was aided by the hostilities in Europe. By February 1915, the price of wheat had increased to $1.68 per bushel, 37% over the highest price of 1914, and the prices of oats and corn had advanced several cents per bushel, oats reaching 60c and corn, 74c.[9]

In 1916, the 1915 improvements in increased industrial production and in agricultural prices, were retained; all lines of business and industrial activity continued to advance and the price of wheat and corn went to $2.00 and $1.00 per bushel respectively.[10]

---

8 Federal Reserve Board, *Annual Report*, 1915, p. 283.
9 Chicago Board of Trade, *Annual Report* 1914 and 1915.
10 Idem.

The continued improvement was soon evidenced in the condition of Seventh District banks. Increased business activity resulted in increased demand for loans which meant increased deposits. At the time of the organization of the System, loans and discounts of member banks in the Seventh District were less than a billion dollars, but by the latter part of 1916, loans had increased to over one billion three hundred million dollars, with a consequent increase in deposits.

This increase in deposits resulted in increasing the credit base, but since similar increases had affected the credit base of the entire System, little use was made of the increased ability to lend either by the Chicago Bank or by any other of the Reserve Banks. Through this entire period, rediscounts with the Reserve Banks in the two largest financial districts of the country, New York and Chicago, remained quite small: in 1914, 9% of the rediscounts in the New York District were made at the New York Reserve Bank; in 1916 the figure was 10%. In Chicago the percentage was 18% in 1914 and 25% in 1916. The popularity of Reserve Banks in the other middle western districts was greater than in the Chicago district however. In the Cleveland district, 22% of all rediscounts of member banks were made at the Cleveland Reserve in 1914, and 42% in 1916; in St. Louis, the percentage increased from 30% in 1914 to 54% in 1916; in the Minneapolis district by 1916 most of the member bank rediscounts were being made with the Reserve Bank, increasing from 31% in 1914 to 83% in 1916.[11]

The principal reason for the lack of use of the Reserve Banks in Chicago and New York was the great strength of the correspondent systems which banks in these cities had developed; it was to be expected that particularly those banks nearer to these cities would be apt to follow old habits of rediscounting. Bankers in New York and Chicago had presented especially strong opposition to the Reserve System on the grounds of interfering with the existing correspondent business, and although after the establishment of the System some attempt was made in Chicago to set an example for using Reserve Bank facilities, it was evidently a half-hearted attempt and charges were made that large commercial banks were discouraging use of the Reserve Bank facilities by the

[11] Computed from data published in the Reports of the Comptroller of Currency, 1914, 1915 and 1916; and from the *Annual Reports* of the Federal Reserve Board, 1914-1916. Some of the early rediscounting was "courtesy" rediscounting whereby some of the larger Chicago banks sought to show the other banks of the District how to make use of the newly organized System. The reasons for such little use being made of the System at this time were really three in number: the policy of the Federal Reserve Board in maintaining penalty discount rates of from 5½% to 6½%; the lack of understanding of the operation of the System; and the well established habit of rediscounting with correspondent banks.

small correspondent banks. The opposition of New York City banks to the New York Reserve Bank was quite open.[12]

During 1916 there were increased investments by the Chicago Bank in commercial bills and government securities, but the amount invested in either type of security did not exceed $10,000,000. Total loans and investments in the latter part of 1917 did not exceed 20% of the credit base of the Bank.[16] Similar investments of the other Reserve Banks were also small, the policy being to invest enough only to make expenses. Such a small use of the credit base would naturally have very little effect on the business activity of the Seventh District, and the recovery following 1914, then was due to forces outside the Reserve System.

The War Period: 1916-1918

Although the Reserve System bore a large part of the burden of financing the War, its credit policy was little more definite than it had been in the previous period except that there was an organized attempt to provide adequate credit for financing military operations.

Immediately upon the United States' declaration of War in April, 1917, the Chicago Bank began to expand its rediscounts and loans to member banks and at the same time increased its holdings of bills purchased, in keeping with the policy of the System. This increase of credit was immediately necessary in order to provide manufacturing and agriculture with the necessary funds to carry on increased operations. Practically every industry in the Seventh District began operating at capacity with the exception of those industries not essential to the conduct of war such as certain building trades.[13] Farmers were producing at capacity but holding their grain to take advantage of higher prices which created a situation ultimately concluding in the greater demand for credit.[14] In order to meet this demand, commercial banks increased their rediscounts at the Reserve Banks because these institutions were more capable of providing the increasing credit than were correspondent banks, and because of preferential rates on paper collateralled by government securities. Between April 1917, the month of the United States' entrance into the War, and December 1917, the New York Reserve Bank aided its members by rediscounting the purchasing bills amounting to $403,100.000, an increase of $385,000,000. The Chicago Bank made the second largest increase, namely, $114,000,000. Other middle western Reserve Banks also made additional credit available although in somewhat smaller

[12] Clark, L. E. *"Central Banking under the Federal Reserve System"*. p. 135.
[13] Federal Reserve Bank of Chicago: *Monthly Report of Business Conditions*, November and December, 1917.
[14] The price of wheat reached $3.50 per bushel and the price of corn, $2.35.

amounts: Cleveland, $59,000,000; St. Louis, $32,000,000; and Minneapolis, $11,000,000.[15]

The rapid pace of industry which developed in 1917 and continued into 1918, was financed by broadening the eligibility rules so that paper collateralled by government securities could be rediscounted at a preferential rate. On January 2, 1918, 25% of bills discounted at Chicago were collateralled by war paper and by September the amount had increased to 77%. In the latter month, the percentage for the entire System was 78.5%.[16]

Because of the absorption of Liberty Loan bonds and certificates of indebtedness. by the early part of 1918, commercial banks no longer possessed surplus funds. This situation became particularly acute in July and rediscounts of the Reserve System increased still more as more of the war financing burden was shifted to its shoulders. Rediscounts of the System doubled between July and the end of the year; those of the New York Bank increased about two and one-half times; those of the Chicago Bank increased at about the same rate as the average for the system. On the other hand, rediscounts at the St. Louis Bank decreased $5,000,000 during this same period.[17]

Because of the rapidly increasing demand for credit, on April 8, 1918, all Reserve Banks except New York and Dallas increased discount rates, the increases varying from ¼% to ½%. New York rates had been increased on April 3 and Dallas rates were increased April 15. This general action was due to the fact that the Treasury had raised the rates on the Third and Fourth Liberty Loans to 4½%, whereas on previous issues the rate had been from 3% to 4%.[18] As a result, money rates hardened and the rate on commercial paper went to 6%.

The increase in rates had little effect, however, for rediscounts continued to advance and those made by the Chicago Bank reached a peak of $279,300,000 in November 1918. In the same month, Rediscounts of the entire System reached a peak of $1,700,000,000. The largest increase in rediscounts took place in the New York Reserve Bank where they more than doubled. However, the New York Bank was enabled to take care of this increase by selling its bills purchased to the Chicago, Minneapolis and San Francisco Banks, thereby reducing its holdings 22%. Throughout the year, the Chicago Bank advanced $83,200,000,000 to the New York Bank through such transactions.[19]

15 Compiled from the *Federal Reserve Bulletin*, 1917.
16 Federal Reserve Board, *Annual Report,* 1918; p. 542.
17 Compiled from the *Federal Reserve Bulletin* 1918.
18 Federal Reserve Board, *Annual Report* 1918. The Reserve Board endeavored to aid the distribution of war securities by maintaining the discount rate a fraction below the rate on government securities.
19 Compiled from *Annual Report* of the Federal Reserve Board 1918.

The Chicago Bank purchased bills from and discounted for other Reserve Banks as well: $13,000,000 was supplied Philadelphia; $12,200,000 went to Richmond; $58,900,000 to Atlanta; $4,300,000 to Kansas City; and $28,500,000 to Dallas. The total lent by Chicago to all banks including New York was $200,300,000, divided evenly between bills purchased and rediscounts.[20]

Although rediscounts remained near the high September level throughout the whole System, with rediscounts of the New York, Cleveland and St. Louis Banks even increasing, the conclusion of the War was evidenced in the Chicago District when rediscounts had declined to $164,000,000 by December, a decrease of approximately $100,000,000. That this decrease in rediscounts and declined to $164,000,000 by December, a decrease of approximately $100,000,000. That this decrease in rediscounting, due to the repayment of obligations of other Reserve Banks, was but a change in form of credit, is shown by the fact that $90,000,000 in bills were purchased in the open market between September and December. Holdings of bills bought were likewise increased by the Cleveland and St. Louis Banks during this period, although only by approximately $10,000,000; these increases furnished financing for crop movements, the purchases being to a large extent bills arising out of grain storage and grain movements.[21] In August, because of the demand for credit to move the crops, the Chicago Bank sold $9,000,000 in purchased bills to the New York Bank, which in the meantime had reduced its holdings.

During this period, open market operations in government bonds played an unimportant part in the policy of the Reserve Board and of the Federal Reserve Bank of Chicago. In the latter part of 1917, the Chicago Bank, as well as the other Banks of the System, disposed of government bond holdings for the purposes of meeting expenses, and the Reserve Banks restricted their operations to relieving the money market when large transfers were made by the Treasury.[22] Following the sale of bonds in 1917, the Chicago Bank allowed its holdings to drop to approximately $6,000,000 in August, but in September, purchases were resumed and by the end of the year, holdings amounted to almost $20,000,000. A similar policy was followed by the other Reserve Banks.[23]

The policy, then, of the Chicago Reserve Bank during the war period was to provide credit to industry and trade for carrying on increased war demand activity by means of rediscounting, particularly paper collateralled by government securities, and to make

20 Idem.
21 Compiled from the *Federal Reserve Bulletin* and the *Annual Report* of the Federal Reserve Board, 1918.
22 Harris, S. E., "*Twenty Years of Federal Reserve Policy*", Vol. I., p. 148.
23 Compiled from the *Federal Reserve Bulletin*, 1918.

very little effort to provide credit through open market operations although some attention was given to the acceptance market. A similar policy was followed by the other Reserve Banks. It was practically the only method open to them since the alternative method of buying and selling government securities on the open market was not well understood.

The financing of the War brought about a demand for new currency issues, also; both Federal Reserve notes and Federal Reserve Bank notes were issued. The Federal Reserve Bank of Chicago had issued no notes before 1917, but in January of that year, $7,000,000 in Federal Reserve notes had been issued, and by December, 1918, the circulation of Chicago notes had increased to $430,000,000. At first the Chicago Bank, like most banks in the System, covered its notes 100% with gold, but as the demand for currency increased, the reserve ratio fell so that by December, 1918, the ratio of gold against Federal Reserve notes for the entire System was 57.5% and for the Chicago Bank 60%[24] The issues of Federal Reserve Bank notes during this period amounted to $117,000,000,000 by the System and $19,000,000 by the Chicago Bank.[25]

The Reserve Banks were enabled to satisfy the greatly increasing wartime demand for credit because of the successful campaign to concentrate all gold and gold certificates in the vaults of the Reserve Banks. Because of this policy and also to some extent because of imports from abroad, the System's reserve doubled by the end of 1918, having increased from $1,733,000,000 to $2,146,000,000; the Chicago Bank's reserve increased from $203,000,000 to $400,000,000 during the period. On the basis of this reserve, credit could have been expanded still further if the need had arisen, without reducing the reserve ratio to the danger point. Not until the post war period, however, was credit increased to the extent that reserve ratios were lowered to the legal limit.

POST-WAR PERIOD: 1919-1923

After the signing of the Armistice of November 11, 1918, the problem of adjustment to a peace time basis presented itself. This readjustment was not accomplished easily or without hardship; it was accompanied by a period of liquidation, (1919-1922), followed by a revival of industrial and business activity, (1922-1923).

1919-1922:

The period of liquidation, however, did not begin immediately upon the signing of the Armistice for the reason that increased demand for farm products brought a temporary improvement in

24 Compiled from the daily balance sheets of the Federal Reserve Bank of Chicago and from data published in the *Federal Reserve Bulletin* 1918.
25 Idem.

business, which, however, was accompanied by increasing unemployment and industrial unrest in some secitons of the country because of reduced industrial production.

By February 1919, the monthly report of the Federal Reserve Bank of Chicago stated that 58,000 men were out of work in the Seventh District. Illinois had the smallest number with only 906 unemployed, and Michigan the largest with 37,500. A study of the "want ads" in leading newspapers of the District also indicates a decrease in labor demand and a decline in the number of "help wanted" items.[26] By July, the labor situation had become threatening; a traction strike was in progress in Chicago and certain crafts of the railroad shop workers were becoming restive; steel workers were on the verge of striking and in down-state Illinois several small strikes were in progress.

The decline in business activity was accompanied by a contraction of credit although the rediscount rates generally in all the Reserve Banks were maintained below market rates.[27] There is no evidence that the Reserve System made any attempt at this time to encourage the movement towards liquidation, but rather it apparently attempted to forestall the inevitable "day of reckoning" by maintaining low discount rates.

During this period of contraction, discounts at the Federal Reserve Bank of Chicago declined 33%, from $172,000,000 to $150,000,000. A corresponding reduction in borrowing was not experienced in the country as a whole, however, for System rediscounts declined only 0.1%. In the New York District, business showed few signs of recession. The large recession in the Seventh District was due to the cancelling of government orders for heavy manufactured goods such as steel war materials. Decreased business from the same cause was felt in the Cleveland District although rediscounts decreased only 15% in that area.[28]

Further evidence of contraction in the Seventh District is the fact that member banks were loaning only 91c on every dollar on deposit in May 1919 whereas in June 1918 they had been loaning $1.21 for every dollar on deposit.[29]

The easy money policy of the board which had been announced to all intents and purposes by the fact that discount rates were maintained below market rates was supported by increased open market purchases of government bonds. System holdings of open

---

26 Federal Reserve Bank of Chicago — *Monthly Report of Business Conditions February*, 1919.
27 Commercial paper rates: 6% to 6½%. Rediscount rates at the Chicago and New York Banks ranged from 4½% to 5½%.
28 Compiled from the *Federal Reserve Bulletin* 1919.
29 Idem.

market bills increased 28% and holdings of bonds 79% between November 1918 and March 1920.[30] During this period, the Reserve Banks of Chicago, Cleveland, Minneapolis, Kansas City and San Francisco participated daily in the open market operations of the New York Bank.[31] The Chicago Bank, however, did not during 1919 play so large a part in these operations as did Cleveland and San Francisco Banks; its purchases were only approximately 50% of the investments made by the San Francisco Bank and 90% of those made by Cleveland. On the other hand, the Chicago Bank increased its holdings of open market bills from $13,000,000 in September 1918 to over $100,000,000 by December 1919.[32]

In addition to cooperating in an easy money policy through open market operations, these same five banks rediscounted and bought paper from the other Reserve Banks, at no time finding it necessary to rediscount with or sell paper to any other Reserve Banks. During 1919, the Chicago Bank loaned $1,328,338,000 to other Reserve Banks:: $575,008,000 went to Philadelphia; $370,-975,000 to Dallas; $300,137,000 to Richmond; $72,190.000 to Atlanta; and $10,028,000 to Boston.[33]

The easy money policy of the Board was soon reflected in Seventh District business; the downward course of production which had begun in early 1919 was reversed; unemployment increased and undustrial unrest practically disappeared.[34] Business improved to such an extent that the usual tendency of increasing business failures at the year-end was reversed: In January 1919, 184 firms and in December, only 48. The increased tempo of business was also reflected in "debits to individual account" which, during the last six months of 1919 increased nearly a million dollars on the average per month, and in the greater demand for Federal Reserve notes, the circulation of which increased from $444,000,000 in January 1919 to $512,615,000 in January 1920.[35]

Beginning in early 1920, however, there was a cessation of buying, sometimes referred to as a "buyers strike," which caused large inventories of goods to be built up throughout the country discouraging further production and reducing prices.[36] In March, prices of a few commodities began to decline and by October, the tendency extended to all articles.

Two industries, mining and railroads, suffered particularly from labor troubles during the retrenchments necessary because

---

30 Compiled from the *Federal Reserve Bulletin* 1920.
31 Federal Reserve Board, op.cit., pp. 1-8.
32 Compiled from the *Federal Reserve Bulletin* 1920.
33 Federal Reserve Board, op. cit., 1919.
34 Federal Reserve Bank of Chicago; *Monthly Report of Business Conditions,* January to June, 1919.
35 Compiled from the *Federal Reserve Bulletin,* 1920.
36 Federal Reserve Board *Annual Report,* 1920, pp. 1-10.

of reduced business activity. A strike of miners practically shut off the supply of coal, not only in the Seventh District, but in the country as a whole; railroads and even hospitals had difficulty in getting fuel in order to continue their activities. The fuel shortage continued until November when the mines were reopened.[37] The railroads operating in and out of Chicago experienced sporadic strikes throughout 1920 which slowed down the movement of materials. One hardware merchant in the Seventh District reported that a $35,000 shipment to him was on the road for three months before it was delivered.[38]

Although the fuel problem was finally solved, at least temporarily, and the railroads eventually broke their strike, the rest of the industrial world was not so fortunate. The price of sugar dropped 59% by November and all goods containing much sugar were being dumped on the market. Shoe manufacturers, as well as many others, were operating at 50% of capacity. As a whole, Seventh District industry was reduced to about 84% of capacity, with a proportionate increase in unemployment and consequent suffering.[39].

A further evidence of declining business activity was the increased failures of business firms which during 1920 grew greater in number month by month, contrary to the usual trend of increase only at year ends. In January 1920, 57 firms failed with a liability of $1,179,009. In December, this figure had increased to 163 failures involving debts of $5,868,000. The monthly average for 1920 was 72 failures as compared to 52 for previous years.[40]

The inevitable period of liquidation was presaged in the Seventh District in early 1920 when there occurred a 38% decline in the credit base of the Chicago Bank due to a decrease in reserve deposits; between January and June, reserve deposits declined from $297,000,000 to $254,300,000, which rediscounts at the Chicago Bank increased from $262,000,000 to $428,000,000. Such a period of decreased member bank deposits, decreased reserve deposits and increasing rediscounts is unusual and indicative of banking difficulties ahead because it shows that distress borrowing is going on.[41] Ordinarily, expansion of credit by a Reserve Bank results in increased deposits of member banks, but when increased borrowing accompanies declining deposits, the borrowing banks are not using newly obtained funds for industrial and business purposes but rather for the purpose of meeting their deposit obligations because of inability to liquidate loans and investments rapidly enough.

37 Federal Reserve Bank of Chicago: *Monthly Report of Business Conditions Nov.*, 1920.
38 Idem.
39 Idem.
40 Compiled from data published in the *Federal Reserve Bulletin*, 1920.
41 Willis, H. P. and Steiner, W. H, *"Federal Reserve Banking Practise"*, p. 813.

Such difficulties did not develop in other districts: rediscounts at the New York Bank declined from $584,000,000 to $518,000,000 while reserve deposits increased $80,000,000; rediscounts at the Cleveland Bank dropped from $120,000,000 to $119,000,000 while reserve deposits increased $90,000,000. In the St. Louis district, however, rediscounts increased as reserve deposits increased until June, when the situation became stable. In Minneapolis a situation similar to that in Chicago developed; between June and December rediscounts increased from $5,000,000 to $18,000,000 while reserve deposits decreased from $44,000,000 to $43,000,000. Increased rediscounts in both Minneapolis and Chicago were due in a large part to distress borrowing attendant on speculation in land, the speculators having expected to be able either to sell their land or to pay for it easily because of the high prices of farm products. Both banks issued warnings concerning this speculation which went unheeded.

During the period of heavy discounting in 1920, the largest increases in rediscounts within the Seventh District were made by reserve city banks and by country banks in Iowa, Illinois and Indiana. In Wisconsin and Michigan, increased borrowing was in evidence only in Detroit and Milwaukee. Between June 1919 and 1920, loans to Chicago banks increased towfold as did those in Indianapolis and Detroit. The borrowing of country banks in Illinois and Iowa doubled also and that of Indiana country banks increased one and one-half times. During 1920, the reserve city banks in Milwaukee increased their borrowing eleven times, Sioux City banks twelve times, and Des Moines fifteen times.[43]

Contrary to this general trend upward of rediscounts, many Michigan banks reduced their obligations to the Reserve Bank during 1919 and 1920; for instance, rediscounts of the Grand Rapids banks were reduced $2,000,000 and those of Michigan country banks, approximately $1,000,000.[44] (See Table 45.)

Table 40.

BORROWING FROM THE FEDERAL RESERVE BANK OF CHICAGO*

SEVENTH FEDERAL RESERVE DISTRICT

Amount Borrowed (000 OMITTED)

	1919 June	1920 June	1921 June	1922 June
Chicago	71,391	229,498	122,692	6,139
Illinois Country Banks	4,256	8,475	11,403	7,524
Total Illinois	75,647	347,973	134,095	13,663

42 Compiled from the *Federal Reserve Bulletin*, 1920.
43 Compiled from uncatalogued data in the library of the Federal Reserve Bank of Chicago.
44 Idem.

TABLE 40—Continued from Page 112

Milwaukee	3,647	33,250	28,860	1,937
Wisconsin Country Bks.	5,533	6,820	10,146	3,734
Total Wisconsin	9,414	40,070	39,006	5,671
Indianapolis	4,797	12,263	10,165	699
Indiana Country Banks	8,504	11,263	11,000	5,044
Total Indiana	13,301	24,112	21,165	5,743
Grand Rapids	6,327	4,832	4,894	1,105
Detroit	21,983	47,194	35,534	------
Michigan Country Bks.	10,765	9,583	20,950	7,434
Total Michigan	39,075	61,564	61,378	8,539
Cedar Rapids	840	4,950	3,066	------
Des Moines	1,457	16,731	9,057	200
Dubuque	240	594	310	------
Sioux City	210	6,287	5,363	------
Iowa Country Banks	14,709	35,962	46,379	23,043
Total Iowa	17,456	64,524	64,175	23,243
Grand Total	$154,893	$428,243	$319,819	$56,859

* Compiled from uncatalogued data in the Library of the Federal Reserve Bank of Chicago.

The distribution of rediscounting in the Seventh District indicates that demand was very heavy from the corn belt and agricultural districts as well as from the larger reserve cities. During the War high prices on farm products, with the consequent increasing land values both in the Seventh District and in other agricultural sections, made investment in farm lands seem very desirable. Many people rushed to purchase land either as a permanent investment or in hopes of immediate increases in value. In order to bring would-be buyers and sellers together number of salesmen left Chicago for the rural areas.[45] If enough customers were not at hand, sales of options were "promoted." In order to finance these increasing sales at speculative prices especially in the three farming states, Illinois, Indiana and Iowa, credit was provided in part by the banks in those areas. The distribution of rediscounting in the Seventh District indicates that this land purchasing was creating part of the credit demand. In spite of the decline in industrial activity and the certain knowledge that the war-time rate of business could not be continued, the demand for money to speculate in land continued heavy and even increased. Speculation of this type was important enough and prevalent enough to draw the criticism of the Federal Reserve Bank of Chicago.[46]

45 Interview with a Reserve Banker.
46 Federal Reserve Bank of Chicago, op. cit., May 1919.

In 1919 the price of land rose to $700 and $800 an acre in some parts of the Seventh District and many pieces of land changed hands as often as four times a year. In order to facilitate speculation, the brokerage or option method of trading was practised involving a loan on the land which in many cases was made as much as two and one-half times the value of the land. In one state, 35% of the farm land was held for quick turn-over during 1919. In an attempt to warn the heedless investors the monthly report of the Reserve Bank of Chicago called the attention of its readers to the 50% decline in land values which followed the Napoleonic wars,[47] but in spite of this warning, it was reported in December that the land speculation mania was spreading.

The temporary upturn in affairs during the latter part of 1919 reacted to the benefit of grain prices but added fuel to the fire of speculative buying and selling of land. Wheat prices in Chicago reached a peak of $3.50 per bushel in December and corn went to $2.10 in August but declined to $1.65 in December. Oats which sold for 75c in September, rose to 89c in December.[48] Trouble began to develop in the fall of 1920. Although bankers put forth strenuous efforts to bring about liquidation, money was not forthcoming to move the crops. As a result of this situation and of the unusually good crops, grain prices which had ranged high during the first half of 1920 fell precipitously when the crops of that year began to be harvested. In September wheat had been as high as $2.70 and corn had sold for $2.18 in May. But by December the price of wheat was as low as $1.65 and corn was 78c. The price of oats followed the same course dropping from $1.20 in June to as low as 51c in December.[49].

In December 1920, rediscounting in the amount of $470,000,000 marked the largest figure ever reached by the Chicago Bank; it was $250,000,000 more than the credit base of the Bank.

After reaching this peak, rediscounts began to decline at Chicago and likewise at the Minneapolis Bank as the result of the use of moral suasion discouraging further borrowing and of direct pressure on borrowing banks for liquidation. These borrowing banks, however, were feeling the adverse effects of dropping price levels in agricultural products. Wheat dropped $1.08 during 1921, reaching a low of $1.00 in November; corn prices dropped from 78c to 42c, the low being in October; oats showed the same trend falling from 49½c in January to 32c in November. Under these conditions farmers and farm owners were having difficulty in meeting obligations at their banks for money borrowed to purchase

---

47 Ibid., June, 1919.
48 Chicago Board of Trade, *Annual Report* 1919.
49 Ibid., 1920.

high priced farm lands, and those banks in turn were having difficulty in meeting their obligations at the Reserve Bank. When the Reserve Banks put pressure upon borrowing bankss to liquidate their loans, they were forced to foreclose on many of their customers who, as a result, were financially ruined. The cry of distress, which immediately arose, was heard in Washington and a congressional investigation of the Reserve Bank's policies was begun under the title of the "Commission of Agricultural Inquiry." Because of the general discontent, the Chicago Bank reduced pressure in rural areas with the result that even after the period of liquidation was ended, much of the agricultural debt still remained to be liquidated. Seventh District agriculture has never completely recovered from this era of speculation.

During 1921 there was a general decline in earning assets of the Reserve Banks as business sought to readjust itself while waiting for a large surplus supply of goods to be consumed. Rediscounts of the entire System declined $1,343,000,000 or 60%. Discounts at New York declined 64%, at Cleveland 62%, at St. Louis 61% and at Minneapolis 60%.

Declines in other earnings assets also took place during 1921. System holdings of bills purchased in the open market dropped $121,000,000, a decline of 59% while investments of the Chicago Bank in this type of paper declined to $1,000,000 dropping 90%. Government bonds were also reduced in amount from the level of $45,000,000 maintained during 1920 and the first quarter of 1921, to $22,000,000 by December 1921.[50]

1922-1923

By June 1922, liquidation in the Seventh District as well as in the country as a whole was nearly complete except in agricultural areas. The agricultural debt had been reduced to some extent, however, by good crops and rising prices. Among agricultural products, cotton made the largest recovery; wheat prices also advanced in spite of decreased exports.[51]

Greatest industrial improvement occurred in the steel and leather industries. Steel output increased as the demand for capital goods and for automobiles improved. The leather industry benefited from the lower wages and prices in the Seventh District as compared with those in eastern districts, and from the fact that the shoe industry increased its operations from 50% to 70%.[52] Improv-

50 Compiled from the *Federal Reserve Bulletin* 1920.

51 Comparative prices of grain, 1921 & 1922:

	November, 1921	*November*, 1922
Wheat	$1.00	$1.10
Corn	.42	.67
Oats	.32	.40

52 Federal Reserve Bank of Chicago, op.cit., 1922.

ing business enabled many borrowing banks to reduce their indebtedness at the Reserve Bank; whereas in January, 1922, 185 banks in the Chicago District and 160 in the Minneapolis District were borrowing more than three times their basic line, by the end of that year, the figures had been reduced to 94 in the Chicago District and 88 in the Minneapolis District.[53] The entire System at the end of 1922 was borrowing only 20% of its basic line. The decrease in volume of rediscounts was offset by the purchase of government bonds.[54]

The year 1923 marked the return of prosperity as economic adjustment was practically completed. In February the Federal Reserve Bank of Chicago considered it justifiable to state in its monthly bulletin that business was again "normal". In May the business index of 101.6 indicated that business activity was above normal and employment was near normal with an index of 98.7 in June. Buying had nearly reached the average for 1923-1925 and in May the index of "Debits to Individual Account" stood at 100.8.[55] Prosperity had once more returned to the Seventh District and to the country as a whole.

THE PROSPEROUS ERA: 1923-1929

The upward trend of business in the Seventh District during the Prosperous Era was not accomplished steadily, but was differentiated into distinct cycles of improvement and recession, each on a higher level than the preceding. The first cycle was completed between 1923 and 1924, the second between 1925 and 1927, and the last between 1927 and 1929.

1923-1924:

The improvement in business which began in 1922 and carried activity to "normal" by mid-year 1923, continued throughout the remainder of that year In August, employment was above normal at an index of 112.4 in the Seventh District and in October production reached an index of 105.4[56] Increased production during this year occurred particularly in the iron and steel industry, the manufacture of automobiles, furniture, shoes and flour; meat packing and stove manufacturing failed to operate at normal.[57]

The field of commercial activity shared in the business improvement. The index of debits to individual account reached normal in June and after a recession was above normal in December. Largest gains in the commercial field occurred in the retailing and whole-

[53] For borrowing of various sections of the Seventh District see Table 45. For explanation of basic line, see footnote, p. 8, Chapter VIII.
[54] Compiled from the *Annual Report* of the Federal Reserve Board, 1921 p. 1-12.
[55] For explanation of indices, see footnote to Table 46.
[56] See Table 46.
[57] Compiled from the *Monthly Report of Business Conditions,* Federal Reserve Bank of Chicago, January to December, 1923.

saling of dry-goods and hardware. Sales of groceries remained below normal and shoe sales were particularly disappointing being only approximately 50% of average.[58]

As business and industrial activity improved, discounts increased in all the Reserve Districts and in turn as rediscounts increased, holdings of government bonds and acceptances were gradually reduced by the entire System. In January 1923 open market purchases of these types of paper amounted to approximately $712,000,000: $255,000,000 of government bonds and $457,000,000 of bills bought, but by December rediscounts had increased approximately $300,000,000 and accordingly holdings of government bonds had been reduced to $104,000,000 and of bills bought to $336,000,000.[59] Discounts at the Chicago Bank increased in keeping with those of the System, from $48,000,000 to approximately $110,000,000; and holdings of open market purchases decreased approximately $40,000,000 in accordance with System policy.[60]

Table 41.

BORROWING FROM THE FEDERAL RESERVE BANK OF CHICAGO
PERCENT OF BASIC LINE BORROWED*
(000 omitted)

	January, 1922		
Banks Located in:	Borrowing	Basic Line	% of Basic Line
Chicago	$ 15,532	$214,775	7.2
Illinois Country	12,968	28,371	45.7
Illinois Total	28,500	243,146	11.7
Milwaukee	6,390	16,350	39.0
Wisconsin Country	7,767	12,878	60.3
Wisconsin Total	14,157	29,228	48.4
Indianapolis	3,810	8,347	45.6
Indiana Country	8,649	18,085	47.8
Indiana Total	12,459	26,432	47.1
Grand Rapids	1,920	5,440	35.2
Detroit	13,237	23,502	56.2
Michigan Country	21,438	46,986	56.3
Michigan Total	31,595	75,928	48.1

TABLE 41—Continued on Page 118

58 Idem.
59 Compiled from the *Federal Reserve Bulletin*, 1924.
60 Compiled from the daily balance sheets of the Federal Reserve Bank of Chicago. See table 47.

TABLE 41—Continued From Page 117

Cedar Rapids	1,861	1,638	113.6
Des Moines	2,060	5,062	40.6
Dubuque	———	649	———
Sioux City	3,516	2,468	142.4
Iowa Country	37,539	21,468	175.5
Iowa Total	44,976	31,204	144.1
Grand Total	$136,687	$405,938	33.6

Banks Located in:	January, 1923 Borrowing	Basic Line	% of Basic Line
Chicago	$ 8,605	$242,134	3.6
Illinois Country	5,496	30,691	17.9
Illinois Total	14,101	272,825	5.2
Milwaukee	———	17,953	———
Wisconsin Country	2,894	14,139	20.4
Wisconsin Total	2,894	32,092	9.0
Indianapolis	255	10,402	2.5
Indiana Country	4,676	19,290	24.2
Indiana Total	4,931	29,692	16.6
Grand Rapids	805	5,863	13.7
Detroit	7,375	54,265	13.6
Michigan Country	5,461	25,264	21.6
Michigan Total	13,641	85,392	16.0
Cedar Rapids	488	1,937	25.2
Des Moines	1,098	5,599	19.6
Dubuque	———	712	———
Sioux City	1,112	2,756	40.3
Iowa Country	18,401	23,112	79.6
Iowa Total	21,099	34,116	61.8
Grand Total	$ 56,666	$454,117	12.5

* Compiled from uncatalogued data in the Library of the Federal Reserve Bank of Chicago.

Table 42.

*INDEX OF INDUSTRIAL PRODUCTION
SEVENTH FEDERAL RESERVE DISTRICT
1923-1924-1925 Base

	Jan.	Feb.	March	April	May	June
1923	87.2	82.4	99.9	93.6	101.6	102.6
1924	98.1	94.9	101.6	101.0	90.1	84.3
	July	Aug.	Sept.	Oct.	Nov.	Dec.
1923	96.9	99.6	99.8	105.4	95.2	87.0
1924	82.7	87.6	98.6	97.4	95.8	90.2

**INDEX TO EMPLOYMENT
SEVENTH FEDERAL RESERVE DISTRICT
1923-1924-1925 Base

	Jan.	Feb.	March	April	May	June
1923	97.2	103.7	95.9	98.3	94.3	98.7
1924	107.2	104.6	102.9	102.3	102.1	101.1
	July	Aug.	Sept.	Oct.	Nov.	Dec.
1923	97.4	112.4	109.4	109.3	109.4	109.3
1924	98.0	94.6	92.6	94.4	92.2	94.6

†INDEX TO DEBITS TO INDIVIDUAL ACCOUNT
SEVENTH FEDERAL RESERVE DISTRICT
1923-1924-1925 Base

	Jan.	Feb.	March	April	May	June
1923	99.1	90.3	99.5	97.6	100.8	98.3
1924	96.9	86.0	99.0	95.7	97.8	94.4
	July	Aug.	Sept.	Oct.	Nov.	Dec.
1923	92.9	86.6	86.7	96.0	91.2	101.7
1924	95.8	92.0	91.3	101.8	92.7	109.7

‡RATE OF DEPOSIT TURNOVER IN RESERVE CITIES

	Feb.	Mar.	Apr.	May	June	July
Chicago	33.8	34.8	33.9	33.3	33.4	31.2
Detroit	36.2	35.8	33.4	33.3	31.9	29.6
Milwaukee	41.1	31.2	29.9	32.0	30.9	30.3
Indianapolis	33.5	37.9	27.5	38.3	37.1	37.4
Des Moines	28.9	28.9	26.1	34.3	42.1	41.4
Grand Rapids	29.7	30.7	30.4	31.4	32.7	31.6

TABLE 42—Continued on Page 120

TABLE 42—Continued From Page 119

	Aug.	Sept.	Oct.	Nov.	Dec.
Chicago	28.4	28.1	28.3	31.6	32.9
Detroit	27.6	28.2	28.3	29.6	29.9
Milwaukee	28.6	30.3	31.3	31.4	33.4
Indianapolis	34.6	36.3	37.3	36.9	36.9
Des Moines	37.9	37.9	36.2	27.9	27.3
Grand Rapids	28.3	30.7	31.6	30.9	36.3

* *Production Index*: The index of production in the Seventh Federal Reserve District referred to in this section and indicated in this table, was compiled from the monthly data published in "Business Conditions" of the Federal Reserve Bank of Chicago. By adding the indices for the various types of industries reported each month and dividing by the number of such indices, an index of production was obtained.
Because of lack of data, no attempt at weighting was made. Since the indices from 1923 to 1927 were computed by the Bank on a 1919 base, it was necessary to shift the base for these years to a 1923-24-25 base on which the remainder of the indices have been computed. There is always some error involved in the process of shifting the base; however, in order to obtain comparable figures, this process was necessary.
In spite of these defects in the method of computation, the course of business as pictured by the composite index corresponds closely with other business indices. Consequently, it may be concluded that this index gives a fairly accurate picture of the course of business activity in the Seventh District.

** *Employment Index*: The Federal Reserve Bank of Chicago does not publish an index for employment within the District. The number of workers employed by industries reporting to the Bank is published, however in "Business Conditions" each month, together with the percentage of increase and decrease. These figures, however, were of little value in attempting to arrive at the course of total employment in the Seventh District because from November, 1923, to March, 1930, the number of reporting firms was not given, and as the number varied widely from month to month, no estimate could be made. At the last publication of the number of firms reporting in 1923, there were 291 firms sending employment statistics to the Bank, and in 1930, over a thousand were reporting their employment figures.
In order to arrive at an estimate of Seventh District employment, the number of workers employed was divided by the number of firms reporting, thus arriving at an average number of workers per firm. Where this procedure was impossible because of lack of data, the average number of workers per firm last obtained was multiplied by the percentage of increase or decrease stated by the Bank to be applicable during that month, to or from the preceding number of workers per firm.
From the figures for the average number of workers per firm per month, an index was computed on a 1923-24-25 base from January 1923 to December 1933. The most important error which occurs through this method results from the fact that there is no assurance that the same firms reported each month. Thus if by chance all the larger firms reported one month and a large group of small firms the next month, an error would be introduced into the calculations. However, by referring to Table 46 it can be seen that fluctuations in employment closely correspond to changes in the business activity. Consequently, it may be assumed that such errors cannot have been so great as might have been expected.

† *Index of Debits to Individual Account*: this index was computed from data published in the Federal Reserve Bulletin.

‡ *Rate of Deposit Turnover*: These data were provided through the courtesy of the Statistical Department of the Federal Reserve Bank of Chicago.

In step with the recovery of business during 1922 and 1923, the reserves of the Chicago Bank increased until by December of the latter year, the total gold reserve amounted to $448,860,000, the largest reserve held by the bank up to that time. Since Federal Reserve note circulation had declined but $100,000,000 since the January 1921 peak issue of $554,000,000, and there had been a $30,000,000 increase in reserve deposits, the reserve proved more

than adequate with the ratio against deposits at 63.3% and against notes, 111.4%.[61]

The Chicago Bank's increase in reserves was not parallelled by total reserves of the System which increased less than $100,000,000[62] between 1921 and 1923. During this period, New York reserves declined $200,000,000, Cleveland and St. Louis reserves increased only about $1,000,000 each and Minneapolis reserves increased approximately $40,000,000.[63]

It is evident from the small gains in reserves of the System as a whole that the increases in the Chicago Bank's reserves occurred at the expense of some of the other Banks of the System. The largest gains were made at the expense of the Banks of New York, Richmond, St. Louis, Dallas, and San Francisco. The gains from the southern and western districts resulted from the fact that business did not improve so rapidly in those regions as in the Chicago District and consequently offsetting items were not created to balance the purchases made from the Chicago area.[64] In addition the districts of Richmond, St. Louis and Dallas habitually lost gold to Chicago throughout the life of the Gold Settlement Fund because the nature of their industries was such that, although they required goods purchased in Chicago, the products were marketed through centers other than Chicago.

Table 43.

LOSSES AND GAINS OF GOLD THROUGH THE GOLD SETTLEMENT FUND*
FEDERAL RESERVE BANK OF CHICAGO
(000 OMITTED)

	Transit Clearings	Federal Reserve Note Clearings	Transferred On Account of U. S. Treasury	Total
1923	98,891	26,497	— 23,000	—102,388
1924	152,621	25,869	—320,500	—142,010

* Computed from the records of the Fold Settlement Fund, Federal Reserve Board, Washington, D. C.

Improved business in 1923 demanded additional credit and accordingly System rediscounts increased between January and October from $547,000,000 to $873,000,000; Chicago Bank rediscounts increased in the same period from $45,000,000 to $118,000,000, all sections of the Seventh District having increased their borrowing from the Reserve Bank. Rediscounting had been encouraged by the Chicago Bank by a reduction of the discount rate on March 15 from 5% to 4½%; the New York Bank took simi-

61 Idem.
62 Compiled from the *Federal Reserve Bulletin* 1921 and 1922 and 1923.
63 Idem.

lar action on June 22, reducing its rate from 4½% to 4%. Further credit was provided by increases in bills purchased: System holdings increased $106,000,000 and Chicago Bank holdings $28,000,000. These increases had been encouraged by reducing buying rates both in New York and in Chicago from 4% to 2½% between January and June 1923.[64]

With business improving and with the market well supplied with cash, System holdings of government bonds were reduced by $330,000,000 between January and October 1923, of which $70,000,000 were sold by the Chicago Bank and $108,000,000 by the New York Bank.

In spite of increased exports of both manufactured goods and grain during 1924,[65] business in general was less active than in the previous year. Although production during the first part of the year was equal to or above the 1923 level, a decline began in May because of surplus stocks which carried production to a lower level in the final half of the year. Employment began a decline in January, 1924, but did not fall below normal until July, two months later than the fall of production below normal. The general decline was induced by a slackening in the production of automobiles which reduced the demand for steel and caused its production to fall below normal. Declines also were experienced in the output of flour, malt and shoes.[66] All industries were not affected, however; production of stoves and furniture maintained the former high level as did building construction and strangely enough, consumption of electric energy.

Although production and employment tended downward during 1923, commercial activity and buying remained at a high level throughout the country.[67] In both October and December, buying was above normal in the Seventh District as indicated by the index of "Debits to Individual Account." This increased volume of trade resulted from two factors, increased foreign demand and improved farm income.[68] The export trade of the United States had increased to approximately the war-time level and in some products had even exceeded war-time volumes. A reduced crop of wheat and corn at higher prices had increased Seventh District farm income by $90,000,000 over the 1923 level. (See Table 49)

---

64 Compiled from the *Monthly Reports of Business Conditions* of the Federal Reserve Banks of Richmond, Dallas and San Francisco.

65 Compiled from the *Federal Reserve Bulletin* 1923.

65 Average yearly exports of articles manufactured in the Seventh District:
Average Export during War: $400,000,000.
Average export 1921-1923: $421,000,000.
Average yearly exports grains important in the Seventh District:
Average Export during War: Wheat, 209,960,000 bu. Corn, 36,046,000 bu.
Average Export 1921-1923: Wheat, 222,448,000 bu. Corn, 99,740,000 bu.

66 Compiled from *Monthly Bulletin of Business Conditions,* Federal Reserve Bank of Chicago.

67 Federal Reserve Board *Annual Report* 1924, pp. 1-10.

68 Idem.

Table 44.

CROP PRODUCTION AND CROP VALUES
SEVENTH FEDERAL RESERVE DISTRICT
1923 - 1933

WHEAT

Crop	Production Bushels	Average Price	Crop Value
1923	82,965,000	1.07	$ 88,772,550
1924	67,965,000	1.45	98,549,250
1925	55,960,000	1.55	86,738,000
1926	66,262,000	1.38	91,441,560
1927	60,256,000	1.32	79,537,920
1928	42,993,000	1.10	47,292,300
1929	60,483,000	1.21	73,184,430
1930	63,737,000	.77	49,077,490
1931	77,259,000	.55	42,492,950
1932	77,200,000	.52	40,144,000
1933	46,291,000	.85	39,810,260
CORN			
1923	976,124,000	.88	$858,989,120
1924	721,019,000	1.06	764,280,140
1925	1,092,525,000	.75	818,393,750
1926	910,389,000	.87	792,038,450
1927	787,986,000	1.01	795,865,869
1928	1,017,822,000	.92	936,396,240
1929	880,941,000	.83	731,015,300
1930	731,822,000	.60	439,093,200
1931	887,842,000	.36	319,623,120
1932	1,065,741,000	.25	266,435,050
1933	824,006,000	.46	379,043,760
OATS			
1923	490,254,000	.43	$215,711,760
1924	608,284,000	.44	291,976,320
1925	588,113,000	.50	244,056,500
1926	496,001,000	.41	203,360,410
1927	454,805,000	.43	235,746,150
1928	624,072,000	.55	343,239,000
1929	501,169,000	.44	220,514,360
1930	565,861,000	.44	248,978,440
1931	469,972,000	.35	164,490,200
1932	523,589,000	.22	195,189,580
1933	304,487,000	.35	106,570,450

Compiled from the *Agriculture Year Book* 1933.

Although trade was in greater volume in the country as a whole, this situation did not prevail in all sections of the Seventh District. The reduction in automobile production was sufficient to curtail buying in Detroit where the rate of deposit turnover declined from 36.2 in January to 27.6 in August. The decline in Chicago and Milwaukee, although somewhat less, was due no doubt to the reduction in output by many industries using steel and the consequent unemployment. Improvement in farm income, however, prevented the decline of trading in those areas more dependent upon agriculture. In Indianapolis the rate of deposit turnover increased from 33.5 in January to 37.3 in October; in Des Moines from 28.9 in January to 37.9 in September; and in Grand Rapids, Michigan from 29.7 to 30.7 in the same period. Evidently without the unusually good crop condition during 1924, business decline in the Seventh District would have been much greater.

Reduction in business caused a slackening demand for credit so that rediscounts declined; those with the System dropped 58% between October 1923 and June 1924 while those with the Chicago Bank dropped 76%. Decreases in rediscounts at New York, Cleveland and St. Louis amounted to 87%, 89% and 70% respectively.[69] All sections of the Seventh District reduced their borrowings, although borrowings of country banks in Illinois and all of Iowa banks dropped somewhat more slowly since the increases in borrowing in these sections had not reached a peak until January or two months later than the peak for the rest of the District. This delayed trend of rediscounts in these agricultural sections resulted from the fact that business activity there depended upon the farmers' income which was not fully realized until December or early January, when the marketing of corn was completed.

In order to prevent stringency in the money market and to encourage business once more, the discount rate at the New York Bank was reduced from 4% to 3½% in June 1924, and again to 3% in August.[70] In conjunction with a policy of lower discounts, Reserve Banks engaged in open market operations in acceptances and in government bonds. The purchase of acceptances had little effect on the amount of credit for the reason that only a small volume of bills was available after the decline in business and the increased investment by the public in the type of paper.[71] In the System as a whole, holdings of bills purchased decreased from $194,200,000 to $37,028,000 between March and December 1924. At the Chicago Bank after January 1924, bills purchased declined from $40,000,000 to $1,000,000 in July but in the latter months of

69 Computed from data published in the *Federal Reserve Bulletin* 1923.
70 Federal Reserve Board *Annual Report*, 1924, pp. 1-12.
71 Idem.

the year, as credit for crop movements was needed and acceptances based on grain movements and storage came into the market, the Chicago Bank reduced its purchasing rate to 2% and by December $32,000,000 in bills purchased was held.[72]

Open market operations in government bonds were somewhat more successful than those in bills purchased. System holdings of government bonds increased from $120,000,000 to $564,000,000 during 1924, while bonds held by the Chicago Bank increased from $10,000,000 to $85,000,000 during the same period.[73]

These open market operations began to be effective in June as member bank deposits, and accordingly reserve deposits, began to increase. From January to May 1924, reserve deposits, began to increase. From January to May 1924, reserve deposits of the Chicago Bank had been fluctuating near $28,000,000 but during June they increased to $318,000,000 and by the end of the year had reached $321,000,000.[74] Reserve deposits of the System increased from $1,922,000,000 to $12,182,000,000 during the same period.[75]

These increases in deposits presaged improvement in business for 1925 although there was very little improvement during the remainder of 1924. Federal Reserve note circulation declined throughout 1924 because business did not have use for the $2,292,000,000 of currency which the entire System had in circulation. By the end of 1924, this amount had been reduced almost 50% to $1,881,000,000. During the same time note circulation at the Chicago Bank declined from $464,000,000 to $215,000,000, and that of New York from $991,000,000 to $870,000,000.[76]

Table 45.

BORROWING IN THE SEVENTH FEDERAL RESERVE DISTRICT*
(000 omitted)

Banks Located in:	January 1923	October 1923	January 1924	September 1924
Chicago	$ 8,605	$ 44,730	$ 6,626	$ 385
Illinois Country	5,496	6,571	7,381	3,172
Total Illinois	14,101	51,301	14,007	3,557
Milwaukee	----------	3,340	1,700	185
Wisconsin Country	2,894	3,555	3,333	1,964
Total Wisconsin	2,894	6,895	5,123	2,149

TABLE 45—Continued on Page 126

72 Idem.
73 Idem.
74 Idem.
75 Idem.
76 Idem.

TABLE 45—Continued From Page 125

Indianapolis	255	6,124	1,585	-------
Indiana Country	4,676	7,984	5,672	3,392
Total Indiana	4,931	14,108	7,257	3,392
Grand Rapids	805	697	275	95
Detroit	7,375	14,088	3,750	1,400
Michigan Country	5,461	6,846	6,714	4,613
Total Michigan	13,641	21,611	10,739	6,108
Cedar Rapids	488	2,422	1,000	-------
Des Moines	1,098	4,514	3,662	772
Dubuque	-------	-------	-------	-------
Sioux City	1,112	1,958	2,501	129
Iowa Country	18,401	15,717	18,817	13,248
Total Iowa	21,099	24,611	25,380	14,149
Grand Total	$56,666	$118,526	762,506	$29,355

* Compiled from uncatalogued data in the Library of the Federal Reserve Bank of Chicago.

Decreased gold imports during 1924 resulted in a decline of the System's reserve of $143,000,000. Because of loss of gold by export and because of unfavorable clearing balances, the reserve of the Chicago Bank fell $200,000,000 during the year while that of New York fell $42,000,000, that of Cleveland $70,000,000, and that of St. Louis $8,000,000. The reserve against notes at the Chicago Bank fell from 106.8 to 96.3 and that against reserve notes from 59.9% to 53.0%[77]

1925-1927:

1925 was a year of increasing production and trade. Monetary stability was restored to the world when on April 28,[78] Great Britain followed by other countries returned to the gold standard; thus foreign trade was financed with greater confidence. An increase in exports of the United States, i.e. $311,864,000 over 1924,[79] as well as greater domestic consumption prevented any excessive accumulation of stocks, and prices in general advanced.

All industries in the Seventh District, both manufacturing and agriculture, shared the improvement in business. Manufacturing, with the exception of the stove industry, was above normal throughout most of the year after the first quarter; the production of automobiles, iron and steel, and shoes made the largest gains. In October, the peak of activity for the entire three year period was

[78] Federal Reserve Board *Annual Report* 1928, p. 11.
[79] U. S. Dept. of Commerce, *Survey of Current Business*, p. 168.

reached when the production index went to 121.6.[80] In agriculture, a short wheat crop and an advance in wheat prices, an unusually large corn crop, and an average crop of oats, combined to maintain the farmer's income from grain. Additions to farm income resulted from increased prices of livestock: the price of cattle advanced from $10.00 to $10.25, that of hogs from $11.00 to $13.00, and that of sheep from $6.00 to $8.25.[81]

Improvement in business was accompanied by increased employment although the number of workers employed failed to reach the levels of 1923 and 1924. In April the index showed employment to be practically normal at 99.6%; an index of 100 was never quite attained during the period.

Table 46.

1925 - 1927

Index of Production

SEVENTH FEDERAL RESERVE DISTRICT

1923 - 1924 - 1935 Base

	Jan.	Feb.	March	April	May	June
1925	92.3	93.5	99.5	100.0	97.9	105.7
1926	96.5	94.5	114.0	107.2	98.1	106.1
1927	90.3	92.6	111.3	107.5	110.5	111.2
	July	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**
1925	102.9	101.7	114.6	121.6	101.6	106.1
1926	114.3	115.2	118.1	117.3	105.0	101.2
1927	102.8	111.9	115.0	112.1	100.5	100.5

Index of Employment

SEVENTH FEDERAL RESERVE DISTRICT

1923 - 1924 - 1925 Base

	Jan.	Feb.	March	April	May	June
1925	94.7	96.2	97.3	99.6	98.0	96.8
1926	98.6	98.9	99.2	100.7	101.2	100.5
1927	100.5	99.0	97.9	96.6	97.5	97.0
	July	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**
1925	96.4	96.1	96.4	96.7	98.1	98.3
1926	99.6	99.9	99.9	101.4	102.1	102.1
1927	96.3	95.6	95.6	93.6	97.5	96.9

TABLE 46—Continued on Page 128

80 Compiled from *Monthly Reports of Business Conditions* of Federal Reserve Bank of Chicago, 1925.
81 Compiled from *Annual Report* of the Board of Trade, 1925.

TABLE 46—Continued From Page 127

Continued From Page 127

Index to Debits to Individual Account

SEVENTH FEDERAL RESERVE DISTRICT

1923 - 1924 - 1925 Base

	Jan.	Feb.	March	April	May	June
1925	113.1	92.3	112.3	105.7	113.8	112.7
1926	109.7	103.6	122.1	116.2	124.8	119.1
1927	117.4	103.7	120.0	120.5	122.7	124.8

	July	Aug.	Sept.	Oct.	Nov.	Dec.
1925	101.9	105.4	105.8	123.1	104.8	119.7
1926	111.3	107.3	107.5	116.9	107.5	125.4
1927	107.3	119.4	118.0	119.4	118.0	134.2

Rate of Deposit Turnover

SEVENTH FEDERAL RESERVE DISTRICT

1923 - 1924 - 1925 Base

1925	Jan.	Feb.	March	April	May	June
Chicago	33.9	34.9	36.5	33.9	35.5	35.2
Detroit	29.1	30.7	30.9	32.0	31.8	32.8
Indianapolis	31.3	32.9	31.2	29.0	31.7	30.9
Milwaukee	36.2	41.3	34.1	33.8	35.6	35.7
Des Moines	22.8	26.5	23.0	22.7	22.3	21.3
Grand Rapids	33.2	36.4	32.6	32.6	32.9	35.2

	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chicago	34.4	30.3	32.7	34.0	33.5	36.9
Detroit	31.8	29.3	32.2	33.3	34.6	35.4
Indianapolis	30.8	29.1	30.6	31.6	32.5	33.8
Milwaukee	37.9	34.4	36.4	39.9	37.8	42.8
Des Moines	26.8	22.0	24.1	26.7	28.0	27.8
Grand Rapids	36.9	37.2	34.5	36.3	36.0	38.1

1926	Jan.	Feb.	March	April	May	June
Chicago	39.4	38.6	38.7	36.2	36.0	35.6
Detroit	35.1	35.0	35.0	36.2	24.4	34.1
Indianapolis	33.9	31.6	31.3	29.3	32.6	32.9
Milwaukee	44.1	44.7	41.4	40.1	41.8	45.4
Des Moines	28.6	25.2	25.6	25.0	26.2	26.2
Grand Rapids	27.2	33.5	32.9	34.5	34.0	33.6

TABLE 46—Continued from Page 128

	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chicago	34.4	30.3	31.8	35.2	36.2	38.4
Detroit	31.8	29.3	32.1	35.7	34.9	34.5
Indianapolis	30.8	29.1	32.8	36.0	37.0	34.2
Milwaukee	37.9	34.4	40.6	43.7	45.3	44.7
Des Moines	26.8	22.0	26.5	28.0	29.8	33.7
Grand Rapids	36.9	37.2	32.2	36.7	33.5	34.7
1927	Jan.	Feb.	March	April	May	June
Chicago	37.5	37.7	36.8	37.4	39.2	37.4
Detroit	35.8	33.4	30.1	34.0	32.1	34.7
Indianapolis	33.9	34.6	32.4	31.6	34.5	32.9
Milwaukee	45.1	48.7	41.3	41.9	43.5	41.9
Des Moines	30.7	29.3	30.9	28.3	30.5	32.5
Grand Rapids	34.6	32.8	32.3	34.4	33.9	34.6
	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chicago	36.4	33.5	37.0	37.8	37.6	38.7
Detroit	35.2	31.8	34.8	35.5	34.4	39.1
Indianapolis	32.8	30.3	32.3	32.8	33.4	33.6
Milwaukee	44.2	37.3	41.4	44.6	44.6	41.7
Des Moines	31.2	25.7	29.6	31.6	31.7	32.6
Grand Rapids	33.5	28.5	31.1	32.6	33.7	33.5

[77] Compiled from the *Federal Reserve Bulletin* and the daily balance sheets of the Federal Reserve Bank of Chicago, 1924.

With manufacturing and agriculture both prosperous, it was natural that trading activity should have been vigorous. Throughout 1925 trades increased as indicated by the figures of "Debits to Individual Account." However, this activity was mainly in the retail business rather than in the wholesale trade. Throughout the year wholesale trade in groceries failed to reach more than three-fourths of normal activity; the wholesaling of shoes was only 50% of normal. The wholesale distribution of hardware, however, improved throughout the year rising above normal in March and continuing above normal. Retail sales were well above the 1923-1924 average during all of 1925, being active enough to move the index to 157 in October.[82]

The increase in trades during 1925 did not take place equally in all parts of the Seventh District. As indicated by the ratio of deposit turnover, the greatest improvement took place in Chicago and districts dependent upon Milwaukee and Grand Rapids, while smaller increases occurred in the Detroit and Indianapolis areas, and the smallest increase in the Des Moines area. The lower

[82] Idem.

rates of deposit turnover in Indianapolis and Des Moines are explained by the fact that the income of the Seventh District farmer did not increase commensurately with that of the worker living in the city.

Between December 1924 and January 1925 rediscounts of the System, following business activity, increased from $283,000,000 to $410,000,000 and by December reached $749,000,000 representing an increase in one year's time of over 200%. During the same period the Reserve Bank of Chicago increased rediscounts from $37,000,000 to $88,000,000, an increase of 139%;[83] this increase took place almost entirely in Chicago, Detroit, Milwaukee and Indianapolis.[84] During this period discounts of the New York Bank increased 20%, of the Cleveland Bank 61% and of the St. Louis Bank 50%; Minneapolis rediscounts decreased 22%.[85]

Because of an evident need for credit, the Reserve Banks bought acceptances in the latter part of 1924 and the first quarter of 1925, increasing System holdings to $399,000,000; however, this amount was reduced by April to $316,000,000 following a demand for credit to be used in speculation.[86] During the latter part of 1924 and early 1925, the Chicago Bank increased its bill holdings from $1,000,000,000 to $43,000,000, but by the end of the year, reduced the amount of bills held by one-third.

With discounts showing a tendency to advance rapidly, the System sold $200,000,000 of government bonds, but since this sale was balanced by the buying of acceptances, the effect was counteracted to advance. During the first six months of 1925, the Chicago Bank's government bond holdings declined to $41,000,000 while at practically the same time holdings of acceptances were increased to $43,000,000.[87]

After it was certain that crop movements had been financed, since rediscounts continued to increase, several Reserve Banks instituted increases in the discount rates, The New York rate was raised to 3½% and there were commensurate increases in many other districts; the Chicago rate, however, was maintained at 4% despite a $30,000,000 increase in rediscounts between September and December.[88] The increase in rates represented merely an attempt on the part of the Board to control the amount of discounting and to discourage speculation. There were sufficient reserves to finance a further expansion of credit if necessary. Although reserves had been considerably reduced in all Banks except New York, in

83 Compiled from the daily balance, sheets of the Federal Reserve Bank of Chicago 1925.
84 Compiled from uncatalogued data in the library of the Federal Reserve Bank of Chicago.
85 *Federal Reserve Bulletin* 1925.
86 Idem.
87 Idem.
88 Idem.

no case were they dangerously low. At the Chicago Bank an increase in reserve deposits from $279,000,000 in January 1924 to $324,000,000 by December 1925, occasioned by increased member bank deposits, was only partially offset by a decline of Federal Reserve note circulation from $420,000,000 to $200,000,000. As a result the reserve ratio had been lowered, but it was not near the legal limit; in January 1925 the reserve against deposits was 68.9% and that against notes 151.4%, and in December of the same year the figures were respectively 69.3% and 126.4%.

The peak of business activity of this, the second cycle of the fourth period, was reached in 1925; during 1926 and 1927 business activity declined. In 1926 industrial output continued large in the country as a whole, but demand did not carry off the supply and prices began to decline. A decline in Seventh Distirct industries, beginning early in 1926, was particularly noticeable in meat packing, and in shoe manufacturing. Falling prices did not affect the production of furniture, iron and steel or automobiles until the last quarter of 1926. The total volume of production was maintained by the increases in production of flour and stoves which industries operated above normal during the last half of the year.[90]

In 1927, however, production continued the trend of recession begun in the latter part of 1926 and after a mid-year recovery finished the year at a level lower than 1926 although still slightly above normal. In the 1927 recession decline in the production of stoves, automobiles and iron and steel were the leading factors; in the last part of the year automobile production was 30% lower than during the same period in 1926.[91]

Reduction in plant operations during 1926 and 1927 reduced employment, which, while remaining at or above normal during 1926, fell below normal after January 1927.

In spite of the difficulties attendent on reduced production and unemployment, commerce continued active during 1926 and 1927; in fact it was even more brisk in the latter year as indicated by "Debits to Individual Account" the index of which went from 109.7 to 125.4 during 1927 and to 134.2 in 1927. All sections of the Seventh District did not experience the degree of trading indicated by the figures for the entire District. During 1926 the rate of deposit turnover declined in Chicago and Detroit and remained relatively stable in Milwaukee. However, in Indianapolis, Des Moines and Grand Rapids the rate of deposit turnover increased indicating increased spending in the territories contiguous to those cities. In 1927, these discrepancies did not exist and the rate of deposit turn-

89 Compiled from the daily balance sheets of the Federal Reserve Bank of Chicago
90 Compiled from the *Monthly Reports of Business Conditions* of the Federal Reserve Bank of Chicago—1926.
91 Ibid—1927.

over remained fairly stable if seasonal changes are taken into account. However there was some tendency for spending to increase in Chicago, Detroit and Grand Rapids which was not evidenced in Indianapolis, Milwaukee and Des Moines.

The increased rate of deposit turnover in 1926 in the agricultural sections of Iowa, Indiana and Michigan was due to improvement in grain, live stock and fruit prices. During 1926 especially and to some extent in 1927, increased grain prices with less than average crops maintained the previous level of farm income from grain while an increase in the price of hogs and sheep increased that portion of farm income from livestock. The income of the Seventh District farmer from grain during 1926 amounted to $1,086,839,000, approximately $62,000,000 less than the previous year, but this decline was more than offset by increased prices of hogs and sheep: the price of hogs went from $10.80 in January 1926 to $14.45 in June, and that of sheep from $13.00 to $14.50 during the same period.[92]

During 1927 as indicated by the deposit turnover of the agricultural areas, Seventh District farm income remained fairly stable. Prices of hogs and sheep were very erratic going both above and below the 1926 prices but with a downward trend with the exception that the price of cattle advanced $5.00 a hundred.[93] In spite of smaller crops of wheat, corn and oats, the income from grain remained stable because of an increase in corn and oats prices. (See Table 44).

During 1926 and 1927 efforts of the Reserve System were devoted to maintaining business at the levels of 1925. In the spring of 1926 when rediscounting was reduced, the System purchased $65,000,000 of government bonds and as a further encouragement to business the discount rate at the New York Bank was reduced from 4% to 3½% in the spring and then returned to 4% in the summer. The participation of the Chicago Bank in the open market operations in the spring of 1926 amounted to $14,000,000 increasing the Bank's holdings to $60,000,000 by June, but this operation was not supported by a reduction of the discount rate which remained at 4%.[94] In the meantime rediscounts at the Chicago Bank had dropped from $110,000,000 to $60,000,000, or a reduction of 45%; and those of the System had dropped from $593,000,000 to $495,000,000 or a reduction of 12%.[95] However, in the fall of 1926 rediscounts increased again as the seasonal demand for credit to move crops developed. Increased security speculation and im-

92 Compiled from the *Annual Report* of the Federal Reserve Board 1926.
93 Ibid. 1927.
94 Compiled from the *Federal Reserve Bulletin* 1926.
95 Idem.

proved business were also contributing factors.[96] Between June and December rediscounts with the System doubled reaching $710,000,-000, while rediscounts with the New York Bank increased from $44,000,000 to $173,200,000, and at the Cleveland Bank from $223,000 to $99,700,000. Increases in the St. Louis and Minneapolis Banks were smaller, being $10,000,000 and $400,000 respectively.[97] Within the Chicago District the tendency to borrow for speculation made itself evident. Between July 24, 1926 and December 31, rediscount increased $82,000,000, or from $54,000 to $136,000,000. $56,000,000 of this increase or nearly 70% was made by banks in Chicago, Detroit and Milwaukee. Other sections of the District increased their borrowings slightly with the exception of Indiana where rediscounts were reduced. Although the fact that the increased rediscounting took place in the largest cities of the District does not alone prove that speculation was the cause, it does appear highly significant when combined with the statement of the Board that speculation was increasing. (See Table 51).

Table 47.

BORROWING OF MEMBER BANKS
SEVENTH FEDERAL RESERVE DISTRICT
(000 omitted)

Banks Located in:	Feb. 28 1925	Dec. 31 1925	July 29 1926
Chicago	$ 3,023	$25,718	$ 9,797
Illinois Country	2,165	5,432	5,724
Total Illinois	5,188	31,150	15,521
Milwaukee	1,168	7,322	5,324
Wisconsin Country	2,238	2,331	1,485
Total Wisconsin	3,406	9,653	6,809
Indianapolis	----------	----------	1,641
Indiana Country	2,929	4,059	6,912
Total Indiana	2,929	4,059	8,553
Grand Rapids	----------	605	1,406
Detroit	3,900	27,447	9,895
Michigan Country	3,337	5,430	4,181
Total Michigan	7,237	33,482	15,482

TABLE 47—Continued on Page 134

96 Federal Reserve Board *Annual Report* 1926, p. 5.
97 Idem.

TABLE 47—Continued From Page 133

Cedar Rapids	----------	----------	----------
Des Moines	----------	500	575
Dubuque	----------	----------	----------
Sioux City	----------	----------	286
Iowa County	9,212	9,116	6,674
Total Iowa	9,212	9,616	7,535
Grand Total	$27,972	$87,960	$53,900

Banks Located in:	Dec. 31 1926	Sept. 29 1927	Dec. 29 1927
Chicago	$43,196	$ 6,135	$13,315
Illinois Country	6,534	3,143	4,814
Total Illinois	49,730	9,279	18,129
Milwaukee	15,319	2,365	4,836
Wisconsin Country	2,354	1,691	1,518
Total Wisconsin	17,673	4,056	6,354
Indianapolis	1,195	----------	89
Indiana Country	6,132	3,135	2,788
Total Indiana	7,327	3,135	2,877
Grand Rapids	1,782	1,321	----------
Detroit	43,136	1,463	21,629
Michigan Country	8,715	3,658	6,601
Total Michigan	53,633	6,442	28,230
Cedar Rapids	----------	----------	----------
Des Moines	484	----------	----------
Dubuque	----------	----------	----------
Sioux City	263	517	1,173
Iowa Country	7,520	2,208	3,095
Total Iowa	8,267	2,725	4,268
Grand Total	$136,630	$25,637	$59,858

* Compiled from uncatalogued data in the Library of the Federal Reserve Bank of Chicago.

After June 1926 as rediscounts began to increase, System holdings of government bonds were reduced by $75,000,000 and the Chicago Bank's holdings by $14,000,000, in an attempt to deprive the market of cash and discourage speculative borrowing. The New York Bank also reduced its government investments $20,000,000.[98]

98 Computed from data published in the *Federal Reserve Bulletin* 1926.

The restoration of the New York discount rate to 4% in August 1926 and the policy of selling government bonds had the desired effect and rediscounts of the System declined by June 1927 nearly 50% to $477,000,000 while at the New York Bank they decreased to $103,000,000 or a decline of 40%. At the Chicago Bank the decline was from $136,000,000 to $62,000,000 or 54%. There was a similar percentage of reduction in the Cleveland Bank but smaller decreases in St. Louis and Minneapolis.[99]

In the Seventh District, reduction of borrowing from the Reserve Bank was general although largest reductions were in those cities which had been borrowing most heavily in December 1926, namely Chicago, Detroit and Milwaukee. Banks in several other cities, namely Indianapolis, Cedar Rapids, Des Moines and Dubuque, had succeeded in wiping out their indebtedness, and the borrowing in many other areas was neglible so that by September 1927, but $24,000,000 was borrowed by Seventh District banks from the Reserve Bank. (See Table 47).

By May 1927, business activity was being so rapidly reduced that the politicians looking ahead to the presidential election in 1928 began to show concern. A vigorous open market policy was instituted in May which was participated in by all Banks in the System. Under this policy, System holdings of government bonds, increased from $376,000,000 to $627,000,000. The New York Bank bought $120,000,000 of bonds; the Chicago Bank, $40,000,000; the Cleveland Bank, $18,000,000; the St. Louis Bank $9,000,000; and the Minneapolis Bank, $5,000,000.[100]

Further encouragement to business expansion was to result from a proposed reduction of discount rates to 3½% at all Reserve Banks. The first reduction was made by the Kansas City Bank on July 29, followed by the Boston and New York Banks on August 5. At this point trouble developed between the Chicago Bank and the Board; the Chicago Bank refused to reduce its discount rate but was finally forced by the Board to do so on April 13. The Minneapolis Bank, the other "hold out," followed very shortly with the desired rate reduction, making a rate of 3½% effective throughout the country.[101]

Under the stimulus of the easy money thus provided, business began to improve in the latter quarter of 1927. Accompanying this improvement, rediscounts also began to increase, but at a more rapid rate than business improvement because much of the borrowed money, about one-third in fact, was being used for speculation. System rediscounts increased $152,000,000 by December

99 Idem.
100 Idem.
101 Idem.

1927; those of the New York Bank increased $16,000,000; those with the Chicago Bank, $34,000,000. Rediscounts at St. Louis declined $17,000,000 and with the Minneapolis Bank, $2,000,000.[102]

In the Chicago District $29,000,000 of the $34,000,000 increased borrowing was from rediscounts made by Chicago, Detroit and Milwaukee banks. Illinois, Iowa and Michigan country banks increased their borrowing to a small extent, but Wisconsin and Indiana country banks reduced their borrowings. Once more it would appear that the seats of borrowing for speculative purposes were Chicago, Milwaukee and Detroit. (See Table 47).

This increase in rediscounts and improvement in business marked the beginning of another upward movement of business which reached its peak in 1929 and resulted disastrously for the country.

1928-1929

The easy money policy inaugurated by the Board in the latter part of 1927 resulted in an advance in production and an improvement in employment and business which reached a peak in June 1929. Manufacturing improved steadily from January to September 1928, the production index of the Seventh District increasing from 90.9 to 125.5. This was followed by a seasonal recession ending in January 1929, after which business improved until June when the peak production of the period was reached with an index of 126. The most important factors in this adavnce were the iron and steel industry, shoe manufacturing and automobile production. There was also a tendency for the production of stoves and furniture to increase during this period although the improvement was not so marked as in the three industries mentioned above. The meat packers, creameries and flour millers failed to make any notable advance in production during this period although they operated near normal.[103]

As a result of increased plant operation, employment was mantained at a level approximately normal throughout the entire period excluding the first quarter of 1928. The improvement in production was not evident in employment until March 1928 when the index of employment which had been six points below normal increased to the normal level of the 1923-1925 period, the base of the index. Throughout the remainder of 1928 and all of 1929 employment was at or above normal. The largest number of men were employed in June 1929, the peak month of production, when the employment index went to 103.8%.[104]

---

102 Idem.

103 Compiled from the *Monthly Reports of Business Conditions* of the Federal Reserve Bank of Chicago, 1928 and 1929.

104 Idem.

Retail and wholesale trade was also active although in the Seventh District retail sales reached a higher level than wholesale. Throughout the last half of 1928 and all of 1929, retail sales were above normal. Wholesale activity was not so great in some lines as in others; sales of dry goods and shoes maintained a higher level generally than groceries and hardware.

Just as all lines of consumers' goods did not experience the same degree of prosperity during 1928 and 1929, neither did all sections of the Seventh District. Data on the rate of deposit turnover indicates that commercial activity increased in all sections of the District except that contiguous to Milwaukee and Des Moines. In Milwaukee the difference in rates of deposit turnover for January 1928 and for July 1929 (the point of greatest activity) was 3.9, and in Des Moines the increases in the same period was only 1.6. On the other hand the increase in deposit turn over in Chicago between January 1928 and November 1929 (the month of greatest deposit turnover in that city) was 12, and the increased in Detroit between January 1928 and August 1929 was 10.4. (See Table 48).

The failure of commercial activity to increase materially in Milwaukee and Des Moines resulted from the agricultural situation since the pressure of falling prices was beginning to reduce farm income. The failure of creameries to operate at normal as well as a decline in livestock prices contributed to the retardation of business activity in and around Milwaukee.

The average Seventh District agricultural income from grain for 1928 and 1929 was $1,112,000,000, about the average for the entire period for which data is available. An unusually large crop of corn in 1928 was the most important factor in maintaining this level as the average prices received were lower in both 1928 and 1928 than for the four previous years with the exception of the oats price in 1928.[106] (See Table 44).

During 1928 and 1929 the price of hogs and sheep fell, a situation that was presaged by erratic price changes of 1927. In March 1928 the price of hogs fell to $5.10, a decline of $4.00 from the price at the same period in the previous year. Hog prices advanced somewhat during the remainder of 1928 and in December had reached only $9.25. In 1929 hog prices were somewhat better although they seldom rose above the $10 level. The situation was similar in the case of sheep. Throughout 1928, the price of sheep averaged approximately $1.00 less than the 1927 price, while the

106 Average prices received by farmers for grain:

		Wheat	Corn	Oats
(Tabulated from the Agriculture	1927	$1.32	$1.01	$ .43
Year Book of the U.S. Dept.	1928	1.10	.92	.55
of Agriculture—1933)	1929	1.21	.83	.44

107 Compiled from the *Annual Report* of the Chicago Board of Trade, 1928 and 1929.

1929 prices remained about $1.00 below the 1928 price.[108] An offsetting factor, however, was the price of cattle which tended to advance from $1 to $2 above the 1927 level in both 1928 and 1929. In June 1928 cattle sold for $13.30, or $2.20 above the 1927 price at the same period; in December, 1928, however, at a price of $14.15, there was only a 5c differential over the December 1927 price. The situation was similar during the first part of 1929 although after June a price decline set in and by December cattle sold for $12.60.[109]

The reduction of some livestock prices while income from grain remained stable, accounts for the failure of business to improve in Iowa and other agricultural sections; and the failure of creameries to operate consistently affected adversely the business of the Milwaukee area. In January 1928, creameries in the Seventh District were operating 89% of normal; during the mid-year operation was increased to normal but it decreased again by the end of the year. In 1929 operation followed a similar course but at a lower level.[110] The failure of such an important Wisconsin industry to increase output in step with other industries, with the consequent failure to increase the income of southern Wisconsin, had an adverse effect upon the business of Milwaukee. If there were other factors in the Milwaukee situation, available data does not give evidences of what they were.

As business improved in 1928, the Reserve Banks sold their holdings of government bonds thus depriving member banks of the means to pay off their indebtedness with the result that rediscounts with the Reserve Banks increased. Between January and June 1928, rediscounts at the Reserve Banks increased from $348,782,000 to $1,031,874,000, while government bond holdings declined from $600,000,000 to $250,000,000. During this time rediscounts with the Chicago Bank increased from $46,000,000 to $156,000,000 and holdings of government bonds decreased from $76,000,000 to $34,000,000; rediscounts with the New York Bank increased $282,000,000 and holdings of government bonds decreased $124,000,000; rediscounts with the Cleveland Bank increased $54,000,000 and holdings of government bonds decreased $30,000,000; and rediscounts at the St. Louis Bank increased $5,000,000 and holdings of government bonds decreased $18,000,000.[111]

Although the demand for credit declined in mid-year of 1928, it again increased in the fall because of crop movements. In the System at a whole, an attempt was made to meet this demand by increasing holdings of acceptances:

108 Idem.
109 Idem.
110 Compiled from the *Monthly Report of Business Conditions* of the Federal Reserve Bank of Chicago 1928 and 1929.
111 Compiled from the *Federal Reserve Bulletin* 1928.

Table 48.

Index of Production
Seventh Federal Reserve District
1928 and 1929

	Jan.	Feb.	March	April	May	June
1928	90.0	105.5	112.8	107.3	111.2	113.8
1929	91.1	94.0	103.0	121.0	120.0	126.0
	July	Aug.	Sept.	Oct.	Nov.	Dec.
1928	114.5	115.2	125.5	123.8	106.5	98.9
1929	115.0	110.6	117.1	116.0	90.8	89.3

Index of Employment
Seventh Federal Reserve District

	Jan.	Feb.	March	April	May	June
1928	94.7	94.0	92.4	99.8	99.8	100.0
1929	97.5	95.8	93.8	100.3	101.7	103.8
	July	Aug.	Sept.	Oct.	Nov.	Dec.
1928	97.8	99.7	102.8	96.6	99.5	99.5
1929	102.2	103.0	79.9	101.8	99.5	102.2

Index of Debits to Individual Account
Seventh Federal Reserve District

	Jan.	Feb.	March	April	May	June
1928	129.4	112.5	127.3	135.6	141.9	142.0
1929	136.3	134.0	157.6	149.2	145.5	143.1
	July	Aug.	Sept.	Oct.	Nov.	Dec.
1928	127.3	127.9	161.2	144.2	136.0	161.3
1929	156.1	164.1	157.1	180.4	157.1	142.1

Rate of Deposit Turnover
Seventh Federal Reserve District

1928	Jan.	Feb.	March	April	May	June
Chicago	44.7	47.5	49.3	42.8	44.0	45.2
Detroit	48.6	44.8	41.7	44.2	46.5	43.4
Milwaukee	31.9	32.6	31.3	30.7	29.1	33.8
Indianapolis	45.4	48.4	47.6	44.4	44.6	47.9
Des Moines	28.6	24.2	28.5	28.6	30.6	31.6
Grand Rapids	35.8	33.1	34.7	33.2	35.7	36.6

TABLE 48—Continued on Page 140

TABLE 48—Continued From Page 139

1928	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chicago	46.7	47.8	49.1	53.3	50.5	44.0
Detroit	41.8	49.9	49.4	43.6	42.1	41.0
Milwaukee	36.9	35.5	38.0	38.3	40.4	35.3
Indianapolis	46.4	45.8	48.3	50.5	51.3	47.8
Des Moines	33.9	29.0	33.8	35.3	35.0	33.7
Grand Rapids	31.9	32.2	36.2	35.7	34.9	32.5
1929	**Jan.**	**Feb.**	**March**	**April**	**May**	**June**
Chicago	38.5	36.8	39.1	42.7	41.4	41.4
Detroit	39.5	39.5	40.6	40.7	41.6	42.*
Milwaukee	33.0	32.1	31.5	33.9	34.9	36.5
Indianapolis	41.9	45.3	43.8	43.5	42.8	41.9
Des Moines	32.3	29.5	29.0	31.0	30.8	32.9
Grand Rapids	32.3	32.3	31.4	33.5	35.1	36.2
1929	**July**	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**
Chicago	38.3	35.7	40.6	41.4	42.7	47.4
Detroit	41.2	41.3	48.9	44.8	43.2	48.8
Milwaukee	34.2	30.9	32.5	34.6	34.7	33.8
Indianapolis	43.5	40.1	42.8	44.6	45.9	47.9
Des Moines	30.3	29.2	31.8	31.4	31.7	29.5
Grand Rapids	33.4	29.9	32.5	34.0	36.3	36.3

On September 5 the System held $67,000,000 in acceptances and by November 7 they had increased to $260,000,000.[112] In spite of the fact that the Chicago Bank increased its bill holdings from $10,000,000 to $38,000,000 in keeping with System policy, rediscounts increased from $123,000,000 to $179,000,000, or 45% even in the face of two increases in the rediscount rate; to 4½% on April 20 and to 5% on July 11.[113] The New York Bank's rediscounts also increased about 8% while their bills purchased doubled; the discount rate at New York was also raised because of the increasing demand for credit.[114]

During 1929 the demand for credit continued to increase until April when System rediscounts reached a peak of $1,450,000,000 and rediscounts at the Chicago Bank, a peak of $84,000,000. This trend was largely due to an increase in brokers loans in New York. Although the Board did not favor a further increase in the discount rates, it was sufficiently concerned over the increased use of Federal Reserve credit for speculative purposes that on February 7, 1929 it issued a warning that its efforts would be turned to seeing

112 Idem.
113 Federal Reserve Board *Annual Report* 1928.
114 Compiled from the *Federal Reserve Bulletin* 1928.

that credit was used in a legitimate way. In endeavoring to accomplish this end, moral suasion was used with little success.[115]

Further sale of bonds and acceptances could not be resorted to in order to stop the expanding credits because most of these resources had been disposed of in late 1928 and early 1929 without effect. Between January and March 1929, System holdings of government bonds fell from $239,000,000 to $170,000,000 and acceptances from $491,000,000 to $217,000,000. At the Chicago Bank government bond holdings fell from $34,000,000 to $26,000,000 and acceptances from $36,000,000 to $18,000,000.[116]

Table 49.

BORROWING FROM THE FEDERAL RESERVE BANK OF CHICAGO*

(000 Omitted)

Banks Located in:	Jan. 26 1928	Dec. 31 1928	Mar. 31 1929	Sept. 30 1929	Nov. 27 1929
Chicago	$14,300	$82,209	$86,416	$31,796	$43,110
Peoria	**	**	----------	400	----------
Illinois Country	4,732	5,272	4,923	3,993	9,089
Total Illinois	19,032	87,481	91,339	36,189	52,899
Milwaukee	363	21,652	19,119	10,618	10,704
Wisconsin Country	1,547	3,115	2,927	4,069	6,709
Total Wisconsin	1,910	24,767	22,046	14,687	17,413
Indianapolis	----------	1,533	6,818	4,068	5,866
Indiana Country	2,301	5,684	7,820	7,052	7,866
Total Indiana	2,301	7,227	14,638	11,120	13,302
Grand Rapids	----------	1,348	953	1,754	2,919
Detroit	8,500	39,775	43,400	35,207	52,341
Michigan Country	5,166	11,014	8,084	8,202	15,115
Total Michigan	13,666	52,142	52,437	45,163	70,375
Cedar Rapids	----------	----------	350	650	650
Des Moines	300	2,294	512	3,006	4,709
Dubuque	----------	----------	----------	100	----------
Sioux City	1,375	1,408	434	1,271	2,394
Iowa Country	3,299	3,706	2,924	2,584	4,256
Total Iowa	4,974	7,408	4,220	7,616	12,009
Grand Total	$41,883	$179,025	$184,680	$114,775	$165,998

* Compiled from uncatalogued data in the Library of the Federal Reserve Bank of Chicago.
** Peoria, Illinois was made a reserve city in March, 1929.

115 Compiled from the *Federal Reserve Bulletin* 1929.
116 Idem.

The reduction in production and employment which took place in June was finally reflected in security prices in October by a catastrophic decline. Following the "crash" in the stock market, discounts at the Reserve Banks of New York, Chicago and Cleveland increased because of the fact that it was necessary for the Banks in these larger centers to carry many loans which would otherwise have been liquidated,[117] in order to prevent a further decline in prices due to the dumping on the market of securities held at collateral. New York rediscounts increased $300,000,000, those of Chicago $163,000,000 and those of Cleveland $20,000,000, in order to meet this need.[118] To relieve the tightness of money as much as possible, the Reserve Banks began buying government bonds and acceptances, increasing System holdings of bonds $362,000,000 and acceptances $491,000,000. In cooperation with this program the Chicago Bank increased its holdings of government bonds $48,000,000, or to $71,000,000, and its acceptances $36,000,000, or to $40,000,000.[119]

At no time during this expansion of credit were the reserve of the System or of the Chicago Bank endangered. During both 1927 and 1928 the reserves of the System increased despite the export of gold which took place during these years; from January 1927 to December 1928 reserves of the System increased to $2,900,000,000 and by August 1929 were $3,040,000,000, or 58% higher. The gold reserve of the Federal Reserve Bank of Chicago increased from $390,000,000 to $548,000,000 during this period, an increase of 41%. The reserve of the New York Bank increased 90%; of the Cleveland Bank 15%, of the St. Louis Bank 5% and of the Minneapolis Bank 11%.[120]

Table 50.

LOSSES AND GAINS OF GOLD THROUGH THE GOLD SETTLEMENT FUND
FEDERAL RESERVE BANK OF CHICAGO

	Gained by Chicago		Lost by Chicago —	
	Transit Clearings	Federal Reserve Note Clearings	Transfer on Account of U. S. Treasury	Total
1927	81,101	—14,791	— 39,700	26,609
1928	— 6,886	3,931	— 21,200	— 23,135
1929	12,707	33,635	—159,400	—113,058

The Chicago Bank's increasing reserve gives evdence of its

117 Idem.
118 Idem.
119 Idem.
120 Computed from data published in the *Federal Reserve Bulletin* 1929.

concious policy of collecting gold and gold certificates to provide for the difficulties which appeared to be ahead; through this policy the Chicago Bank was able to maintain favorable balances with the Gold Settlement Fund. During 1928, the Chicago Bank gained gold at the expense of many of the other Reserve Banks, particularly New York, Richmond, St. Louis, Dallas and San Francisco; and lost more or less gold to the others.

The $200,000,000 increase in the Chicago Bank's reserve permitted an increase in reserve ratios despite a small rise in reserve deposits and an increase in Federal Reserve note circulation. In January 1927 reserve deposits of $326,000,000 were backed by a reserve of 68.2% and a Federal Reserve note circulation of $265,000,000 by a reserve of 84.5%. In August 1929, the month in which the largest gold reserve in the entire history of the Bank were held, $358,000,000 in reserve deposits was backed by a reserve of 100.3% and a Federal Reserve note circulation by a reserve of 67.1%.[121]

Although business activity had reached unprecedented heights, and the demand for credit was greater than at any time since 1921, the gold base of the System as well as of the Chicago Bank had proved entirely adequate as a credit base. Since employment was high and only a small minority of the population was without a supply of material goods, the fact should be recognized that subsequent difficulties were not the result of an insufficient metallic base for either credit or money and therefore attempts in 1933 to solve the difficulties by purchasing silver and gold at exorbitant prices in order to "expand the credit base" were dodging the real issue and not contributing one iota to the solution of pressing economic problems but rather were making solution more difficult.

The Depression Period: 1930-1933

The depression which followed the over-extended business conditions and the orgy of speculation in 1928 and 1929, was in evidence by 1930, and until the latter part of 1932 activity continued to decline. However, business began to improve in 1933 and continued to advance throughout the year. Because of these two distinct movements within the period, it will be considered in two sections: 1930-1932, and 1933.

1930-1932

Although production and employment remained for a time at a relatively high level and retail trade continued large, business activity in the country as a whole began to decline in 1930. Seventh District production remained near normal until the first signs of

121 Compiled from daily balance sheets of the Federal Reserve Bank of Chicago.

decline in August whereas employment had remained near normal until July when decline had set in. Production was reduced particularly in the manufacture of stoves, furniture and automobiles. The milling of flour and the manufacture of crude iron and of steel remained near or above normal.

Commercial activity also continued near normal until a downward tendency appeared in the latter part of the year. The index to "Debits to Individual Account" fell from 135.2 in January to 113.7 in October. The decline was first indicated in February in the smaller reserve cities, but the rate of deposit turnover did not show a decline in Detroit until March, nor in Chicago until April.[122] (See Table 51).

Decline in the income of the Seventh District farmer was even more rapid than that of the city dweller. Although the wheat and oats crop was above normal in 1930 and the corn crop average, the prices of these products had declined greatly. The average price received for wheat was 77c, a 44c reduction from the previous year; corn prices had fallen 23c to 60c, and the price of oats, a relatively unimportant crop in the Seventh District remained practically stable.[123] Reductions also took place in livestock prices; cattle prices fell from $13.25 in February 1930 to $11.25 in November; the price of hogs fell from $9.30 to $7.80 and that of sheep from $9.75 to $7.45 from January to December.[124]

With the reduction of business and the decline of speculation, the demand for credit was reduced. Rediscounts of the System fell 62%, from $567,615,000 to $272,361,000 between January and September, while rediscounts of the Chicago Bank fell 85%, from $74,000,000 to $11,000,000. Acceptance holdings likewise were reduced, System holdings falling $124,000,000, a reduction of 49% and Chicago Bank holdings falling from $32,000,000 to $12,000,000, a reduction of 62%.[125] Reductions in the earning assets of other Reserve Banks also took place during 1930, the second largest occurring at the New York Bank which reduced earning assets of this type by 50%.

In order to discourage a further decline in business activity, discount rates were reduced throughout the System, the New York and Chicago rate being reduced to 4% on February 7, 1930. Further reduction to 3½% was made by the New York Bank on March 14, and by the Chicago Bank on June 21.[126] Government bonds, however, were purchased, System holdings being increased

---

122 Compiled from the *Monthly Reports of Business Conditions* of the Federal Reserve Bank of Chicago, and from the *Federal Reserve Bulletin*—1930.
123 Compiled from the *Annual Report* of the Chicago Board of Trade 1930.
124 Idem.
125 Compiled from the *Federal Reserve Bulletin* 1930.
126 Compiled from the *Annual Report* of the Federal Reserve Board 1932.

from $510,587,000 to $396,000,000 and Chicago Bank holdings from $22,000,000 to $82,000,000.[127]

The encouragement given to business combined with a seasonal improvement resulted in checking the downward trend in December 1930, at which time there was a small increase in rediscounts and acceptance holdings. This seasonal recovery, however, was short-lived and the decline resumed its course in the first part of 1931, during which year business conditions gradually became worse. By December, the Seventh District index of production had fallen to 48 and the employment index to 60. By this time all lines of industry were affected with the exception of the flour milling industry which continued to operate above normal. Industries declining the most were furniture manufacturing whose production index fell to 23 in December, and the iron and steel industry whose index fell to 32.[128]

The farmer continued to experience falling prices: wheat prices dropped 22c to 55c per bushel; corn went to 36c and oats to 35c. Livestock prices fell also, cattle going to $6.80 in December, hogs to $4.05 and sheep to $4.15.[129]

Under these industrial conditions, retail trade declined with greatest decreases felt in the dry goods whose index fell to 37 by December. This reduction was general throughout the Seventh District.

Credit demand continued at a low level until August 1931 when rediscounts of the System began to increase, going from $222,000,000 to $774,000,000 by December. Rediscounts of the Chicago Bank increased from $12,000,000 to $95,000,000 during the same period. Similar increases were experienced in New York, Cleveland, St. Louis and Minneapolis.[130] This upward trend of rediscounts is explained by distress borrowing on the part of member banks as it was accompanied by a decline in System reserve deposits from $2,300,000,000 to $2,069,000,000 between September and December 1931, and in Chicago Bank reserve deposits from $320,000,000 to $260,000,000, indicating a decline in member bank deposits. A situation involving increasing rediscounts and decreasing deposits always indicates banking difficulties ahead.[131]

In order to relieve the situation further, rediscount rates were again reduced during the first half of 1931: on May 7 the Boston rate was reduced to 2%; on May 7 the New York rate to 1½%, and on May 9 the Chicago rate to 2½%. As the demand for credit

127 Compiled from the *Federal Reserve Bulletin* 1930.
128 Compiled from *Monthly Reports of Business Conditions* of the Federal Reserve Bank of Chicago, 1931.
129 Compiled from *Annual Report* of the Chicago Board of Trade, 1931.
130 Compiled from the *Federal Bulletin,* 1931.
131 Idem.

increased, however, toward the latter part of the year, the rates at all of the Banks were raised, those at Richmond and Cleveland to 4% and at the other Banks to 3½%.[132]

The upward trend of affairs in 1931 was short-lived and business continued its decline during 1932 in spite of efforts towards recovery. During mid-year there was a less than average seasonal improvement and by December production in the Seventh District had fallen to 38% of normal. There was no seasonal increase in employment, the index of which continued to decrease through the year; by December employment had fallen to 48% of normal although it had begun the year at 62.2%. Accompanying the decline in production, retail trade also diminished with largest reductions in dry goods and hardware; sales of groceries maintained a relatively high level.[133] In 1932 the largest business decline occurred in Chicago and Milwaukee; Des Moines and Grand Rapids activity, as indicated by the rate of deposit turnover, remained stable; and Indianapolis business improved toward the latter part of the year.

This maintenance of business in the agricultural districts occurred in spite of a rapidly declining farm income. During 1932, the average price of wheat was 52c, a reduction of 3c under the previous year; the price of corn was 25c, and a reduction of 11c; and the price of oats was 22c, a reduction of 13c. Although crops were exceptionally good, the farmer's total income from grain fell to $501,968,000.[134] (See Table 44). The price of livestock continued to fall also, that of cattle declining from $6.65 in January to $4.15 by December and that of hogs from $4.10 to $3.40 during the same period. Prices of sheep, however, the least important of the three types of livestock in the Seventh District, rose from $4.23 in January to $5.40 in December.[135]

Throughout the year 1932 earning assets of the System were increased by the purchases of government bonds in order to "pump" credit into the market. During the year, System holdings increased $1,000,000,000 and those of the Chicago Bank increased $157,000,000, or from $105,000,000 to $262,000,000. The New York Bank increased its holdings $425,000,000; the Cleveland Bank $117,000,000; the St. Louis Bank $39,000,000; and the Minneapolis Bank $27,000,000.[136]

Rediscounts continued to decline and business conditions to become worse in spite of efforts towards encouragement. Throughout 1932 discounts of the System declined $400,000,000 and those

132 Compiled from the *Annual Report* of the Federal Reserve Board, 1932.
133 Compiled from the *Monthly Reports of Business Conditions* of the Federal Reserve Bank of Chicago, 1932.
134 Compiled from the *Annual Report* of the Chicago Board of Trade, 1932.
135 Idem.
136 Compiled from the *Annual Report* of the Federal Reserve Board 1932.

with the Chicago Bank, $60,000,000. New York rediscounts declined $100,000,000, and Cleveland $72,000,000.[137]

System acceptances declined because of lack of trading to $305,000,000. The New York Bank's holdings fell $154,000,000 and the Chicago Bank's holdings, $37,000,000. There were similar decreases in the investments of the other Reserve Banks.[138]

Although the final months of 1932 marked the end of business decline both in the country as a whole and in the Seventh District, the banks of the country at this time were making little use of the facilities of the Reserve banks.

In 1933 slight improvement in business was evidenced. Although in the country as a whole, conditions did not improve perceptibly until after March,[139] in the Seventh District improvement began in February, when the production index rose to 39.0 as compared with 36.2 in January. Employment also improved, the index rising from 49.4 in January to 50.0 in February. The important factors in this improvement were stove production, steel ingot production and increased operation of creameries.[140]

This slight upward trend in production did not communicate itself to the entire Seventh District. In the Seventh District as a whole, commercial activity generally as indicated by "Debits to Individual Account" continued to decline. This situation was true of all areas in the District except the Chicago area where the rate of deposit turnover increased from 22.6 to 25.6 during January and February; some improvement was also noticeable in Milwaukee and Indianapolis. (See Table 51).

Even this slight improvement in business was of significance since it replaced for the first time a definite upward trend for the continued decline since 1929. The improvement was considerably impeded, however, by banking difficulties which reached a climax in March 1933, and not until after the banking situation was improved did definite business improvement become confirmed.

The banking crisis in early 1933 was the culmination of ten years' developments. Since 1922 an increasing number of bank failures had given evidence of unsound banking practices and after 1929 with the decline of values, this condition had come to the fore. Between 1921 and 1929 6,000 banks failed and in one year after the decline in values, (1931) 2,300 bank failures occurred.[141] Efforts to remedy the situation were made by the Federal Government but where either insufficient in scope or too long

137 Idem.
138 Idem.
139 Federal Reserve Board *Annual Report* 1933, p. 3.
140 Compiled from the *Monthly Reports of Business Conditions* of the Federal Reserve Bank of Chicago, January-March, 1933.
141 Compiled from the *Federal Reserve Bulletin* 1931.

delayed to prevent by February 1933 a major collapse of the banking system. In the Seventh District failures, which had been prevalent during the period 1921 to 1924, declined between 1924 and 1929 but increased after 1929. 1931 was the year of the largest number of bank failures in the Seventh District when 631 banks failed. After 1921, the total number of Seventh District bank failures was 2,231, involving $154,149,000 in capital and $857,560,000 in deposits.[142]

The frequent failures of banks in the Seventh District, particularly during 1932 caused the public to lose confidence in banks generally. This was especially the case after the failure of the Bain group of Banks in Chicago and of several private banks in Indianapolis. There were three immediate results of this lack of confidence on the part of the public: (1) a decline in deposits; (2) a movement of deposits from country banks to city banks; and (3) an increase in demand for currency. The largest decline in total deposits occurred in Michigan where the banking crisis was particularly severe. Between December 1932 and December 1933, in all states of the District but Michigan, central reserve city banks, reserve city banks and city banks gained deposits while country banks in all states lost deposits. In Michigan, the decline of deposits in the reserve cities Detroit and Grand Rapids, was greater than that of deposits in Michigan Country banks. (See Table 52). The increased demand for currency occassioned also by lack of confidence in banks and giving rise to hoarding, first appeared in the Seventh District in March and April of 1931. Although the demand for currency had been gradually and steadily increasing since 1928, there had been no sudden upward swings until 1931 when the demand for bills of large denominations, particularly $10, 20 and $50 indicated that hoarding was in progress.[143] The demand for currency in other Federal Reserve Districts did not develop as soon as the demand in the Chicago District. The St. Louis District did not evidence additional demand until the first quarter of 1932, and the Atlanta District not until December 1932.[144]

In the mid-year of 1932, Seventh District currency demand increased $300,000,000 through fear occasioned mainly by the failure of the Bain Banks in Chicago. The demand then showed a tendency to decline but with the country-wide hoarding which began in 1933, increased to a level approxmiately $1,110,000,000 above the February 1928 level which had been normal. This level

142 Compiled from data published in the *Federal Reserve Bulletin* 1921-1932 and January and February, 1933; data was not available for the remainder of 1933.
143 *Annual Report* of the Federal Reserve Board, 1933, p. 5.
144 From data provided by the Statistical Dept. of the Fed. Res. Board, Washington, D.C.

was higher than that of any other Reserve District; New York was second in currency demand and Boston third.

Table 51.

CHANGE IN DEPOSITS*

BETWEEN DECEMBER, 1932, AND DECEMBER, 1933

SEVENTH FEDERAL RESERVE DISTRICT

Illinois County Banks	—18.0%
Chicago (Central Reserve City) Banks	8.0%
Peoria Banks	4.5%
Iowa Country Banks	—27.0%
Cedar Rapids Banks	11.0%
Des Moines Banks	3.0%
Dubuque Banks	29.0%
Indiana Country Banks	—31.0%
Indianapolis Banks	13.0%
Michigan Country Banks	—36.0%
Detroit Banks	—63.0%
Grand Rapids Banks	—49.0%
Wisconsin Country Banks	—25.0%
Milwaukee Banks	12.0%

* Compiled from data published in the Annual Report of the Comptroller of Currency 1933.

Table 52.

1930 - 1933

PRODUCTION INDEX

SEVENTH FEDERAL RESERVE DISTRICT

	Jan.	Feb.	March	April	May	June
1930	79.9	81.7	98.5	98.5	90.7	90.5
1931	60.7	62.5	74.5	76.0	71.0	66.0
1931	60.7	62.5	74.5	76.0	71.0	66.0
1932	40.8	43.0	45.0	45.0	45.6	44.0
1933	36.2	39.0	38.0	40.7	43.2	58.0
	July	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**
1930	91.0	77.6	78.0	82.0	66.7	66.3
1931	59.0	59.1	59.1	56.0	48.0	48.0
1932	36.0	38.9	42.1	41.2	42.9	38.0
1933	58.1	58.8	56.1	54.6	55.4	63.3

TABLE 52—Continued on Page 150

TABLE 52—Continued From Page 149

INDEX OF EMPLOYMENT

SEVENTH FEDERAL RESERVE DISTRICT

	Jan.	Feb.	March	April	May	June
1930	99.0	95.4	95.4	95.4	93.8	92.2
1931	77.2	75.6	76.4	77.2	77.1	77.3
1932	62.2	63.4	64.6	63.4	59.2	58.1
1933	49.4	50.0	51.0	48.9	48.7	51.0

	July	Aug.	Sept.	Oct.	Nov.	Dec.
1930	89.4	86.3	84.0	82.3	79.8	72.8
1931	74.6	71.1	68.8	67.5	60.8	60.0
1932	58.0	55.4	53.4	51.0	49.4	48.8
1933	55.3	60.6	65.1	67.0	64.5	60.9

INDEX OF DEBITS TO INDIVIDUAL ACCOUNT

SEVENTH FEDERAL RESERVE DISTRICT

	Jan.	Feb.	March	April	May	June
1930	135.2	113.1	136.7	131.6	136.2	138.2
1931	111.5	87.9	102.8	104.4	103.2	108.7
1932	81.1	65.0	72.7	74.5	64.2	69.5
1933	58.8	48.7	*	50.7	57.0	63.5

	July	Aug.	Sept.	Oct.	Nov.	Dec.
1930	126.4	121.8	117.8	113.7	114.2	121.4
1931	87.8	88.3	85.8	87.5	75.2	85.8
1932	63.4	62.6	59.3	58.6	51.3	61.1
1933	71.3	63.6	62.0	63.9	56.8	44.4

RATE OF DEPOSIT TURNOVER

SEVENTH FEDERAL RESERVE DISTRICT

1930	Jan.	Feb.	March	April	May	June
Chicago	39.9	40.4	*	40.6	38.8	42.2
Detroit	40.3	40.3	*	39.9	35.4	33.7
Milwaukee	34.8	32.2	*	31.6	31.7	35.5
Indianapolis	45.9	43.7	*	43.0	41.9	46.8
Des Moines	35.5	33.2	*	33.7	34.3	35.0
Grand Rapids	33.0	29.1	*	29.5	30.9	33.2

1930	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chicago	42.2	36.0	32.0	34.9	33.2	33.6
Detroit	37.5	33.1	33.9	33.9	28.7	38.0
Milwaukee	33.2	30.3	28.3	28.3	29.8	29.6
Indianapolis	46.4	47.4	41.9	43.7	45.2	42.7
Des Moines	33.9	31.2	31.5	32.9	31.5	30.9
Grand Rapids	31.9	29.2	28.2	28.1	30.9	33.1

1931	Jan.	Feb.	March	April	May	June
Chicago	31.6	29.5	30.7	31.2	31.9	32.3
Detroit	33.4	32.6	35.8	33.0	33.9	35.4
Milwaukee	28.4	27.7	27.5	25.4	26.8	28.2
Indianapolis	39.8	40.6	38.0	39.1	40.2	36.3
Des Moines	33.1	28.3	29.0	28.7	28.7	27.0
Grand Rapids	32.0	27.6	27.6	27.6	30.5	32.4

1931	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chicago	30.0	26.8	27.2	28.3	27.9	28.6
Detroit	28.5	27.2	30.0	29.1	30.8	34.4
Milwaukee	25.9	24.5	26.3	25.8	24.3	30.4
Indianapolis	39.1	33.0	34.1	35.4	34.7	36.1
Des Moines	27.8	25.4	29.0	32.4	32.0	30.2
Grand Rapids	30.5	28.6	29.0	27.6	27.2	28.6

1932	Jan.	Feb.	March	April	May	June
Chicago	28.1	26.1	27.2	31.1	26.2	28.1
Detroit	41.5	24.7	30.0	32.1	33.2	33.7
Milwaukee	29.8	24.9	22.9	25.1	25.1	25.9
Indianapolis	36.3	35.3	33.8	32.1	33.9	31.9
Des Moines	24.9	28.4	25.3	27.8	28.3	29.5
Grand Rapids	32.1	25.6	22.4	27.5	26.4	28.9

1932	July	Aug.	Sept.	Oct.	Nov.	Dec.
Chicago	29.1	27.8	27.3	25.5	23.7	23.7
Detroit	34.2	29.1	27.6	26.9	25.5	33.3
Milwaukee	27.3	23.2	25.4	25.1	25.6	31.0
Indianapolis	33.4	27.0	29.9	30.2	32.6	31.1
Des Moines	32.7	28.9	29.6	30.9	32.0	33.0
Grand Rapids	29.2	25.8	29.1	25.6	24.8	27.2

TABLE 52—Continued on Page 152

TABLE 52—Continued From Page 151

1933	Jan.	Feb.	March	April	May	June
Chicago	22.6	25.6	*	26.9	25.6	26.5
Detroit	34.4	14.9	*	34.8	27.2	40.3
Milwaukee	27.9	31.3	*	27.2	26.4	28.9
Indianapolis	29.8	33.4	*	*	*	*
Des Moines	33.6	33.5	*	25.5	29.3	27.2
1933	**July**	**Aug.**	**Sept.**	**Oct.**	**Nov.**	**Dec.**
Chicago	29.6	24.1	24.3	24.8	23.3	22.9
Detroit	36.2	31.0	34.1	31.6	29.6	31.1
Milwaukee	32.3	28.7	27.6	29.5	26.1	27.6
Indianapolis	*	*	32.2	32.5	31.5	32.4
Des Moines	26.7	22.7	24.1	24.8	25.9	26.7
Grand Rapids	*	*	*	*	28.0	30.1

* Data not available.

Although the lack of confidence in Seventh District banks was most evident in Chicago and Indianapolis and in many country districts, the weakest banking situation actually proved to be in Detroit. In late 1931 when pressure of depositors in Seventh District banks forced increased borrowings from the Reserve Bank, rediscounts with the Chicago Reserve Bank increased from $20,000,000 in September to $95,000,000 in December. Some of this increase undoubtedly resulted from the usual seasonal demand for credit attendant upon crop movements, but a large share of it resulted from the distress borrowings of Detroit banks. In fact, $47,000,000 or 62% of this $75,000,000 increase was borrowed by Detroit banks whose deposits had decreased, since 1931 while loans and discounts remained near the 1931 figure.

In 1932 the Detroit situation succeeded in righting itself temporarily with the help of outside aid and rediscounts were reduced $46,000,000 by July 1932. In 1933, however, the situation gradually became worse; Detroit deposits fell 70% from the December 1931 level and deposits of the state of Michigan 50%, while Detroit loans and discounts declined only 40% and loans and discounts of the rest of the state of Michigan, 45%. On February 14 the Governor of Michigan declared a four-day bank holiday but since this period did not prove long enough for the Detroit banks to liquidate their loans, the holiday was extended. Because of a lack of eligible paper to rediscount, February discounts of Detroit banks increased only to $20,000,000 or 50% of what had been borrowed in 1932. The aid provided by these rediscounts with the Reserve Bank did not prove sufficient and it was necessary to

liquidate the largest Detroit banks after the end of the national banking holiday.

After the banking holiday in Michigan and the subsequent closing of banks at Alabama, Kentucky, Tennessee and Nevada, and because of a holiday declared in New York and Illinois on March 4th, 1933, it became practically necessary for President Roosevelt to declare a national moratorium, which action was taken on March 6.

At the close of the banking holiday on March 15 when some banks were reopened and many insolvent banks were forced to remain closed, and after the creation of the Temporary Federal Deposit Insurance Corporation, confidence returned and business began to improve. The depreciation of the dollar and the resulting temporary increase in exports also improved business sentiment to some extent.[145]

In the Seventh District industrial production continued through 1933 the improvement begun in February and reached in August an index of 58.8% of the 1923-1925 average. Employment increased in the country as a whole to 73% of normal and in the Seventh District to 67% of normal. (See Table 51). The most important fields in which these increases occurred were the iron and steel industry, the stove industry, automobile manufacturing, flour milling and production of creamery products such as butter and cheese.[146]

There was improvement in commercial activity also following March 1933 although the peak was reached in June followed by a decline the remainder of the year. Lines of goods in which trading was most active were groceries and hardware; increases in the sale of dry-goods and shoes were not large.[147]

An increase in farm prices increased the Seventh District farmers' income from grain in spite of less than average crops. The average price received for wheat was 85c, a rise of 27c over the previous year; corn was 46c, a rise of 21c; and oats was 35c, a rise of 13c. The income from these grains in the Seventh District amounted to $515,400,000, an increase of $101,224,000 over the previous year. The price of cattle also increased from $3.73 to $5.15; that of hogs from $3.05 to $5.00; and that of sheep from $5.50 to $7.70.[148]

---

145 Exports from the United States, 1933: (000 omitted)

January	$120,589	July	$144,194
February	101,515	August	160,000
March	108,015	September	199,000
April	105,217	October	184,000
May	114,203	November	192,000
June	119,794	December	190,000

146 Compiled from the *Monthly Reports of Business Conditions* Federal Reserve Bank of Chicago, 1933.

147 Idem.

148 Compiled from the *Annual Report* of the Chicago Board of Trade 1933.

The Federal Reserve System played a small part in this business recovery during 1933 by making some direct advances to member banks. Because the open market policy enabled the member banks to build up large reserve deposits, and because the demand was relatively small, member banks were able to supply the credit demand without recourse to borrowing from the Reserve Bank. After March rediscounts with the System declined $600,000,000 and holdings of government bonds increased $400,000,000 to $2,400,000,000. The rediscounts of the various Reserve Banks all declined in keeping with those of the entire System as their purchases of government bonds increased their holdings of that type of paper. Rediscounts at the Chicago Bank declined $45,000,000 to less than $10,000,000 and bond holdings increased from $262,000,000 to $437,000,000.[149]

The purchase of open market bills was relatively unimportant also during 1933, System holdings falling as low as $7,000,000 in August and September although there was a seasonal increase in both the spring and the fall. The open market course of purchased bills of the Chicago Bank was similar to that of the System, the amounts held falling as low as $1,000,000 in mid-year 1933 with seasonal increases in the spring and fall.

Table 53.

BORROWING FROM THE FEDERAL RESERVE BANK OF CHICAGO

(000 omitted)

Banks Located in:	Jan. 30 1930	Sept. 25 1930	Mar. 26 1931	Dec. 30 1931
Chicago	$ 2,867	$ 1,348	$ 489	$ 9,198
Peoria	300	*	*	*
Illinois Sountry	5,363	1,135	2,259	6,887
Total Illinois	8,530	2,483	2,748	16,085
Milwaukee	495	*	*	2,390
Wisconsin Country	5,595	1,371	1,045	3,349
Total Wisconsin	6,090	1,371	1,045	5,739
Indianapolis	1,699	*	*	*
Indiana Country	7,256	2,767	2,824	4,338
Total Indiana	8,955	2,767	2,824	4,338

149 Compiled from the *Federal ReNserve Bulletin* 1933.

Grand Rapids	1,350	*	*	1,728
Detroit	34,609	*	975	49,544
Michigan Country	10,225	3,578	3,270	11,126
Total Michigan	46,184	3,578	4,245	62,398
Cedar Rapids	*	*	*	*
Des Moines	832	*	190	2,337
Dubuque	*	*	*	*
Sioux City	903	573	*	367
Iowa Country	2,670	617	1,337	4,045
Total Iowa	4,405	1,190	1,527	6,749
Grand Total	$74,164	$11,389	$12,389	$95,309

Banks Located in:	Dec. 30 1932	Feb. 23 1933	Dec. 28 1933
Chicago	$ 105	*	*
Peoria	*	*	*
Illinois Country	3,539	3,385	146
Total Illinois	3,644	3,385	146
Milwaukee	43	14	*
Wisconsin Country	2,210	3,233	235
Total Wisconsin	2,253	3,247	235
Indianapolis	*	4,916	*
Indiana Country	1,869	4,098	290
Total Indiana	1,869	9,014	290
Grand Tapids	832	757	*
Detroit	*	16,256	*
Michigan Country	5,427	4,316	3,350
Total Michigan	6,259	21,323	3,350
Cedar Rapids	*	*	*
Des Moines	*	564	*
Dubuque	*	*	*
Sioux City	100	250	*
Iowa Country	2,607	3,055	153
Total Iowa	2,707	3,871	153
Grand Total	$16,732	$40,840	$ 4,174

Although the banking crisis reduced the reserves of some of the Reserve Banks enough to force them to borrow from other Banks, by the end of the year, due to the return flow of gold fol-

lowing the passage of the Act of March 4, 1933[150] the reserve of the Banks were restored to a high level. In January the gold reserves of the System amounted to $3,547,000,000 and of the Chicago Bank to $906,634,000, the highest in the history of the System. At this time the Chicago Bank's reserve ratio against Federal Reserve notes was 103.2% and against deposits, 40.4%. As hoarding developed many people preferred gold with the result that the reserve of the System was reduced to $2,800,000,000 and of the Chicago Bank to $746,000,000. During the period of active withdrawal of gold, the reserve of the New York Bank was so reduced that it borrowed $150,000,000 from the Chicago Bank; Chicago could easily supply this amount for even at its lowest point Chicago's reserve against notes was still 60.1% and against deposits 35.1%. After the banking holiday, so rapidly did gold return to the Chicago Bank that in spite of the loan to New York, the reserve was $888,600,000 by the end of March.[151] After March, although the reserves of the Chicago Bank as well as of the entire System were theoretically maintained at a high level, the actual gold was being shipped to the Treasury in Washington. Some still remained in the vaults of the Chicago Bank but was gradually being shipped to Washington in small installments.[152]

During 1934 there was a continued improvement in business both of the country and of the Seventh District, but the Reserve Banks lent little money because the large reserve balances of member banks allowed them to meet the modest credit needs without borrowing. In both the Chicago and St. Louis Banks the periods in which no member bank loans appear in the portfolios were becoming ever more frequent. The few industrial loans made by the Chicago Bank amounted to $278,000 in 1933 and to $3,796,500 in 1934.[153] The Reserve Banks appear to have a decreasing importance in the banking activities of the Seventh District as the period following the crisis of 1933 gets under way.

RECAPITULATION

The Federal Reserve System was placed in operation at a difficult time in world history; a European War was beginning which eventually involved most of the major countries of the world and which disturbed the economic equilibrium for many years to come. During the first few years of its operation, the System made no attempt to be influential in the business or banking world, but was content with consolidating its technical organization. During 1913

150 Amendment to Section 11, Federal Reserve Act.
151 Compiled from the daily balance sheets of the Federal Reserve Bank of Chicago.
152 *Chicago Tribune*, June 25, 1935.
153 Act of February 3, 1933; amended Section 13 of the Federal Reserve Act to permit loans to individuals, corporations or partnerships for periods not exceeding 90 days on pNromissory notes or obligation of the United States Government.

and 1914 a business recession had developed which ended with a flood of war orders from Europe, but neither during the depression or during the following expansion did rediscounts with Reserve Banks in industrial centers indicate much dependence on the central banks for credit. As the holdings of bills and government bonds were also small, neither did the newly organized System provide funds indirectly for either encouraging of financing business expansion.

Although during early operations of the System, the Banks in the various districts developed certain characteristic problems of their own, in general by the conclusion of the War, there was little to differentiate one Reserve Bank from another except difference in size; the System operated as a unit after 1914 and during the increased operations to finance the United States' part in the war.

The entrance of the United States into the War brought immediate for large amounts of credit to provide which it was necessary to sell bonds to investors of the country. In marketing these bonds, the Reserve Banks acting as agents for the Government arranged for sales to every individual who could be prevailed upon to buy. In a great many cases the marketing was done through the member banks, the Reserve Banks making preferential rates on paper discounted collateralled by government bonds in order to enable the commercial banks to carry the bonds until they were sold. Commercial banks were aided also by the Reserve System in purchasing short-term certificates of indetbedness which were used to bridge the gap in Treasury finances between the various bond issues. In all of this financing each Reserve Bank played its part carrying that part of the burden assigned to it, the operation of one bank not distinguishable from the operation of another. Needless to say the Chicago Bank carried its share of the burden.

The War naturally gave an impetus to business calling for a great expansion of credit, and although the Armistice was signed in the latter part of 1919, business in the country as a whole and the demand for credit continued active until 1920. During the first quarter of 1919 there was a slight recession in business in the Seventh Federal Reserve District which was not in evidence in the rest of the country. Since business continued good in the rest of the United States, however, that of the Seventh District recovered and the credit demand revived to keep pace with that of the other districts.

The stimulus of war-time inflation had run its course by mid-year of 1920, in the latter part of which year a period of liquidation began. The period of readjustment had been presaged

in early 1920 by a reduction in buying, a building up of inventories and a decline in prices. Although no effort was made to discourage the use of credit before 1920, the rediscount rates had steadily increased until in 1920 a rate of 7% on most classes of paper was reached at both the New York and Chicago Banks. After June 1920 the demand for credit slackened as the process of liquidation got under way. Industrial liquidation took place in both the country as a whole and in the Seventh District in as orderly a manner as is possible in such a period of crisis. However, in the Seventh District particularly and to some extent in the Minneapolis District, liquidation in agricultural areas was rendered difficult by falling prices on agricultural products and by speculation in high priced farm land. Although both the Chicago and Minneapolis Banks issued warnings in 1919, speculators paid no heed. In 1920 when the Chicago Bank was practically forced to require a reduction in borrowing because the reserve was approaching the legal limit, the investors in farm land resisted stubbornly by liquidating efforts and carried their case successfully to Washington where political influence required the Board and the Chicago Bank to ease their pressure towards reduction in the borrowing of agricultural areas in the Seventh District. As a result, when liquidation was complete in manufacturing, it was not complete in agriculture. Banks in agricultural sections continued to be heavy borrowers from the Chicago Bank for several subsequent years.

Following the completion of liquidation in manufacturing areas in 1921, business began to improve in 1922 and by 1923 again reached a normal level. Between 1923 and 1929 business activity of the United States and of the Seventh District went through three distinct cycles, each at a higher level than the preceeding one, so that by 1929 business activity was abnormally great. During these years the credit available to business was controlled by the purchase and sale of government bonds in the open market and by the use, for the first time by the System, of the discount rate.

The improvement in business was aided particularly after 1924 by the completion of liquidation in the agricultural area and improved agricultural prices, and by increased production of automobiles with its effect on iron and steel products. The manufacture of shoes, stoves and furniture also aided in improved Seventh District business.

The Chicago Bank cooperated generally with the System when the policy of discount rate reduction and open market operations was designed to end the business recession of 1927 and stop the foreign gold movements to this country. The rate at the Chicago Bank was reduced by order of the Board at the conclusion of this disagreement. After the provision of the money market with funds made

available by this policy, the third cycle of business expansion took place which ended in the collapse of 1929.

After 1929, business activity declined in all sections of the United States, production and employment decreased and prices fell. With the decline of values banking failures became numerous. The failures of banks in Chicago and Indianapolis and in many country sections weakened public confidence which resulted in a movement of deposits from smaller to larger banks and in the withdrawal of deposits in the form of cash for hoarding, the largest withdrawals for this purpose occurring in the Seventh District. Banking difficulties reached a climax in the Seventh District when the Michigan bank holiday was announced on February 4, 1933 in order to protect Detroit banks which had been giving evidence of trouble since early 1931. After the subsequent national bank holiday confidence returned and currency began to flow back to the banks. Although the Chicago Reserve Bank had the largest demand for currency, by its policy of building up a large gold reserve prior to 1933, it was enabled to loan gold to the New York Bank which needed reinforcements to keep its gold reserve above the legal minimum.

After March 1933 business improved in the Seventh District as well as in the country as a whole. Immense purchase of government bonds by the Reserve Banks no doubt aided this improvement by enabling member banks to build up large reserve balances so that credit was readily available for borrowers who could provide adequate security. Except for this one activity, the Reserve Banks did not play an important part in business improvement after 1933. Member banks no longer found it necessary to rediscount and the Federal Government had taken over custody of the country's gold reserve; except for performing certain routine functions such as the clearing of checks, the Federal Reserve Banks were not so important a factor in the banking system as they had been before 1933.

CHAPTER VII.

EVALUATION OF CREDIT POLICIES

Theories concerning the place of central banking policy in influencing business activity are many and varied ranging on the one hand from those of theorists who contend that central banking policy can and should direct business activity of a country, to the other extreme of belief that the central bank cannot direct business along the channels which it should follow and that therefore banking policy should be a neutral factor in the situation and allow business entire self-direction. In the first case, the central bank would necessarily be influencing and directing business at all times by varying the amount of credit available to various lines of endeavor, but in the latter case the central bank would be an institution to be used in emergencies when it would always be ready and willing to provide aid to the distressed with adequate security.

As yet no central bank has attempted complete control of business without the aid of political control. In Russia state control aids the central bank in the general direction of commercial and industrial activity. In Great Britain, according to traditional policy, the Bank of England has played a neutral part in relation to business and on the other hand the United States, particularly since the close of the war, the Federal Reserve System has attempted to control business activity to some extent by changes in the amount of credit outstanding brought about through varying and rediscount rate of the Reserve Banks and through purchase and sale of government securities.

Although some of the officers and directors of the Federal Reserve Bank of Chicago have indicated by word and action their preference for the traditional English system, their opinions have never been sufficiently influential to overcome the desire to control credit and particularly the desire to control credit for political purposes. In spite of an undercurrent of opposition to the philosophy behind the operation of the System, the Chicago Bank has co-operated to a great extent in carrying out the policies to which the System was committed. The success of this policy has varied; at times control was successful and at other times it was insufficient to ward off periods of emergency.

Since each of the twelve Reserve Districts differs geographically and has its particular regional problems, a picture of the interaction of commercial and industrial activity and credit policy of the country as a whole would not necessarily be a picture of any particular district. In middle western and western districts, for instance, the demands of agriculture influence credit movements to a great ex-

tent whereas in the eastern and New England districts, the needs of manufacturing are the most influential factor. It is pertinent and necessary, therefore, to examine separately the operation of reserve credit policy in the Chicago District and the part played by the Reserve Bank of that district.

FEDERAL RESERVE CREDIT POLICY IN THE SEVENTH DISTRICT

The demand for credit to be provided by the Reserve Banks may be of two kinds: that which derives from commercial and industrial activity, and that arising from financial emergencies or periods of stress. When the former type of demand is the more important, the period is known as "normal," but when distress borrowing out-weighs the demand of business, the period becomes one of emergency. During the existence of the Federal Reserve System, there have been two periods of so-called normal borrowing, namely 1914-1922 and 1929-1933.

Normal Periods 1914-1918

During the early years of the System's operation, no attempt was made to regulate the amount of credit. The first attempt at control occurred during the War with the intent of directing the flow of credit into those industries which were most essential in conducting the War. Before the entrance of the United States into the War, the Reserve Banks had been content to invest in the Federal and local government securities in sufficient quantities to yield an income for meeting their operating expenses; rediscounting provided only a minor part of the earning assets. In this way, all Reserve Banks were kept in condition to carry the burden of war financing for it was considered inevitable that the United States would be drawn into the struggle. In this policy, the Chicago Bank concurred, with the minor difference that it maintained its discount rates somewhat higher than those of other Reserve Banks. This differential tended to discourage rediscounting and gave rise to complaints that the "Chicago Money Trust" was attempting to discourage use of Reserve Bank facilities in order to retain the borrowing of their correspondent banks.[1] In 1916, however, Chicago rates were lowered to the approximate level of the other banks.

1926-1927

During the second normal period the policies of the Chicago Bank were so closely related to those of the System that separate

[1] *Chicago Tribune*, January 3, 1915.

results cannot be distinguished; throughout the period the Chicago Bank cooperated with the System.

After the crisis of 1921, liquidation in the rest of the country as well as in the Seventh District was complete by June 1922 except for certain isolated agricultural areas. In March and April 1922 the discount rates at the maddle western and southern Reserve Banks were lowered from 5% to 4½%; rates at the three eastern Banks had been lowered to 4½% in January and in June were again cut to 4%. These decreases were accompanied by increased purchases of governmnt bonds. By mid-year of 1922 business began to improve and as it continued to do so during 1923, the Reserve Banks reduced their holdings of government bonds to prevent undue expansion of credit since the Board was definitely committed at this time to a policy of stabilization of business conditions.[2] The reduction in government bonds also represented an attempt on the part of the Board to test the effect of the purchase and sale of such securities and to test member banks demand for credit.[3]

Reductions in Reserve Bank holdings of government bonds in the latter part of 1923 and the uncertainty of a presidential election in 1924 combined to retard business activity, particularly in the Seventh District, an effect which was not desirable from the viewpoint of the party in power, and in January, 1924, a program of increased open market purchases of government bonds was inaugurated. Discount rates, however, were unchanged in most of the districts because the Board at this period was relying more upon open market operations than upon the discount rate to accomplish its ends.[4] This program evidently had the desired effect for business improved. Following the election in November, government bond holdings were again reduced and the discount rates again raised in the four eastern districts which had previously made reductions.

During 1925 and 1926 no significant policies were undertaken and no indicative movements of assets of the Chicago Bank occurred; the Board in following its policy of stabilizing business was satisfied to maintain the "status quo." However in 1927 business activity began to decline, as in 1924, just before a presidential election. An attempt to put into operation the same policy which had solved the problem before the 1924 election, brought about the desired improvement but brought about also a period of speculation when the Board lost control of the situation.

Until 1927 and the adoption of the easy money program, the

---

2 Harris, S.E., "*Twenty Years of Federal Reserve Policy*", p. 88.
3 Ibid., p. 161.
4 Ibid., p. 173.

Chicago Bank cooperated very closely with System policy. Although there was no organized buying of bonds in the open market by all Reserve Banks, the Chicago Bank followed the suggestions of the Board and increased its holdings in 1922 and 1924, and reduced them in 1923 and 1925. Also in conjunction with Board policy, little use was made of the discount rate as an instrument of control; when rates were generally reduced in 1923, the Chicago Bank reduced its rate also, and from June 1923 to September 1927, made no changes in rate but depended almost entirely, as did the entire System, upon open market operations for directing the flow of credit.

By these means the Board was successful during this period in stabilizing business; Keynes calls it a triumph of the management of the dollar.[5]

Adequacy of Credit:

During this period of great business activity, the credit provided by the Federal Reserve Bank of Chicago was evidently adequate td meet the needs of the Seventh District. In the fall of each year the Chicago Bank increased its holdings of acceptances, usually based on grain marketing transactions, in order to provide added credit for the movement of middle western grain. There were also seasonal increases in rediscounts, but at no time during the period did the banks of the District borrow over one-fourth of their basic line.[6] (See Table 54.)

Since the Chicago Bank always stood ready to buy any acceptances offered to it and since such a small proportion of the credit available to the District as measured by the basic line was borrowed it may be concluded that more than sufficient credit was available for the use of the banks of the District.

---

5 Keynes, J. M., *"Treatise on Money"*, vol. II, p. 258.

6 The basic line was first introduced into Federal Reserve policy by the Phelan Act which permitted Reserve Banks to charge progressively increasing rates as the borrowing of a member increased in proportion to its contribution to the resources of the Reserve Bank. The theory was that each member bank was entitled to its proportion of resources of the Reserve Bank and that if it borrowed in excess of this rightful share, other banks suffered. This type of rate structure was adopted by only three Reserve Banks, Atlanta, St. Louis and Kansas City. The Federal Reserve Board, however, proved lukewarm to the idea and the Act was finally repealed.
The Federal Reserve Bank of Chicago never adopted the progressive rate plan zut it did adopt the idea of a basic line as one of the criteria for judging credit expansion. The proportion of the masic line being borrowed by a member, however, is not the sole determinant or credit extension but merely one of the factors, management, probable use of credit, and type of security offered as collateral, being more important. In some cases a bank might be borrowing only a small proporition of its basic line and still be denied credit, while a bank in a different situation borrowing a large percent of its basic line might receive extension of credit.
The basic line of a member bank as computed by the Chicago Bank is the amount contributed to the Reserve Bank plus 65% of its reserve deposits, multiplied two and one-half times.

Table 54.

PERCENT OF BASIC LINE BORROWED BY MEMBER BANKS SEVENTH FEDERAL RESERVE DISTRICT.*

June, 1922	12.9
December, 1922	12.5
June, 1923	21.1
December, 1923	21.5
June, 1924	8.7
December, 1924	6.1
June, 1925	9.0
December, 1925	15.8
June, 1926	12.1
December, 1926	24.1
June, 1927	10.8

PERIODS OF EMERGENCY

The close relationship in times of normal or ordinary business activity between the Chicago Bank's policy and System policy, has not always continued through times of emergency and periods leading up to emergency.

Although the two periods of emergency, 1920-1921 and 1929-1933, had their origin in entirely different situations, there were many similar elements involved. In both cases, the approach to a period of emergency was marked by a comparatively easy money policy; in both cases the result of the policy, particularly in the Seventh District, was speculation; and in both cases the Chicago Bank was obliged to rely, with some success, upon moral suasion to halt the movements.

Early in 1919 there was a tendency towards liquidation, particularly in the Seventh District, but no encouragement to this movement was given by the Federal Reserve System. On the contrary, government bonds were purchased and although rediscounts began advancing after a sharp decline following the close of the war, no increases in discount rates were made until the latter part of 1919. The addition to the reserve deposits of member banks made by government bond purchases, coupled with the failure to raise discount rates in the face of a speculative psychology inherited from the war, no doubt were important factors in the development of the speculative era of 1920.

Elements in the prelude to the crisis of 1929 were somewhat similar. The one great difference was that the 1927 easy money policy was premeditated by the Board whereas the policy of 1919 was something of an accident resulting from the fact that the effect of open market operations was not clearly understood. The

situation in 1927 was marked by a business slump in the face of a presidential election To encourage a return of business activity and to cooperate with foreign banks in stopping a gold movement to the United States an easy money policy was decided upon. In order to prevent criticism of the New York Bank on the grounds that reduction in rates was being made for the benefit of Wall Street, it was planned to have the first reduction made by an interior Reserve Bank. Another consideration, although unstated, was that if New York had lowered rates first, funds would have flowed from New York to the interior Banks (see see Chapter XIII) a state of affairs which would have been unpopular with the New York speculative element.

In spite of careful planning, all did not go well with this scheme. Kansas City started the ball rolling by reducing its rate to 3% on July 29, 1927; St. Louis made the same reduction on August 4; Boston and New York followed on August 5 and Cleveland on August 6. By the end of the month Richmond, Atlanta and Dallas had followed suit and the only Banks remaining on the 4% rate were those at Philadelphia, Chicago, Minneapolis and San Francisco.[7] The difference in rates soon began to cause funds to move from New York to Chicago as evidenced by the fact that borrowings of member banks in the City of Chicago were reduced over $2,000,000 while borrowings of other banks in the District increased over $10,000,000 during this period of rate discrepancies.[8]

This situation and the personal feeling of both the officers of the New York Bank and some members of the Reserve Board inspired considerable pressure for a rate reduction at Chicago. During August the Chicago Bank had presented the old rate of 4% to the Board for approval but approval was refused. Since no agreement could be reached regarding the rate, the Board announced, over the vigorous protest of the Chicago Bank, that a 3½% rate would be effective at Chicago on September 7. In the vote of the Board on the question of reducing Chicago's rate, Platt, Hamlin, and Miller voted against the resolution and Cressinger, McIntosh, James and Cunningham voted favorably. Secretary Mellon was absent, being en route home from a trip to Europe.[9]

In the course of the furor following the Board's announcement, charges and counter-charges were made. Chicago newspapers and some in New York criticized the Board severely for its action, reflecting the deep resentment of Chicago bankers and some of the more capable financiers of the country.[10] The debate and ani-

7 Federal Reserve Board *Annual Report* 1926 and 1927.

8 Computed from uncatalogued data in the Libraury of the Federal Reserve Bank of Chicago.

19 Interview with Mr. Edmund Platt, former Vice-Governor of the Federal Reserve Board.

10 Amos, J. C., *"Fixing the Discount Rate at the Federal Reserve Bank of Chicago"*. A Master's thesis in the Library of the University of Illinois, pp. 39-46.

mosity centered around the power of the Board to force a Reserve Bank to change its rate. In Chicago particularly this was the paramount issue; the majority of bankers reacted emotionally on the question feeling that the Board's action was an insult to their banking community and forgetting the more important phase of the situation, namely the merits of the effect of lowering the rate. The Federal Reserve Bank of Chicago requested an opinion from the Secretary of the Treasury and from the Attorney General and planned to carry the case to the courts to test the power of the Board to reduce a regional Bank's rate.[11] However, as heads cooled off and with appointment as Governor of the Board of Roy A. Young of the Minneapolis Bank, which had also refused to reduce its rate, such action by the Chicago Bank was fortunately dropped.[12]

The reason given by the Board for the high-handed action of forcing rate reduction, was that the growth in volume of foreign funds in the New York money market was becoming alarming and was causing embarrassment in Europe. By lowering the level of rates in the United States, funds would be transferred from New York to London, leading to a rise in Sterling Exchange. Such a course of affairs would help foreign buyers to purchase American products, particularly from products. In addition, lower rates would bring more financing to the New York banks. On the whole, the movement of farm products would be facilitated, and the entire financial structure would be favorably affected.[13]

There may have been reasons other than the foreign situation influencing the desire for lower rates. Industrial production had declined during the latter part of 1927 in the country as a whole, and 1928 was presidential year. From a political point of view, it was most important and desirable that business activity should not only cease to decline, but should improve, in order that there might be "a chicken in every pot". Such a desperate effort at obtaining a rate reduction would seem to substantiate the view that the political motivation was a strong contributing cause.

It is doubtful if the Federal Reserve Board had the power to order directly a rate change. However, the Board does have the power to refuse to approve a rate submitted for review by the Board and thus leave a Bank without a rate and therefore unable to discount. The Board can intimate that a change of rate is desirable and usually have such a suggestion acted upon.[14] Harris evidently thinks that the Board had ursurped the power to establish rates for he points out in "Twenty Years of Reserve Policy" that

11 *The New York Times*, September 7, 1927.
12 Upon his arrival from Europe, Secretary Mellon was incensed at the action of the Board; it is perhaps significant that Governor Crissinger resigned shortly thereafter.
13 *Federal Reserve Bulletin*, 1927, p. 630-631.
14 Willis, H. P. Article in the *Chicago Journal of Commerce*, September 9, 1927.

since the Board has undertaken to establish rates, it has generally kept lower rates in force.[15] Whether the Board actually was intended to exercise the power of forcing a rate reduction or whether it had such power, are relatively unimportant questions. The point is that the rates were reduced and the effect was as disastrous as Dr. H. Parker Willis had predicted.[16] It appears in this case that the welfare of the country was sacrificed for the supposed benefit of the Republican Party, and for the doubtful benefit of promoting foreign purchases of farm products, because the low rate policy, combined with open market operations, inaugurated an expansion of credit which was soon out of control.[17]

The decreased discount rates were appropriately accompanied by increased purchases of government bonds: System holdings increased 100% and Chicago Bank holdings, 50%. Evidently the Chicago Bank did not participate so enthusiastically as the other Banks in the open market policy, which might be expected from Chicago's general opposition to the whole policy.

The result of the easy money policies of both periods was increased speculation. In the Seventh District, speculation in land played the most important part in 1920-1921, whereas during the period 1927-1929, speculation was entirely in securities. In 1919 and 1920, the price of land increased rapidly and changes of ownership increased in number until in some parts of the Seventh District it was estimated that over 50% of the land was held for resale. Although the Chicago Bank issued warnings against this land speculation and the inflated prices, the movement continued. The monthly bulletin of the Chicago Bank directed attention to the plight of British investors in land following the close of the Napoleonic wars, and correlated that situation with the one current in 1919. However, issuance of this warning served little purpose other than to place on record the Reserve Bank's disapproval; in country districts where the type of speculation was most prevalent, the warning probably came to the attention of very few Seventh District bankers who, in general, were and are "rule of thumb" rather than scientific bankers and seldom if ever read the monthly bulletin of the Reserve Bank. Consequently, the ineffectiveness of the Chicago Bank's warning may be attributed to lack of publicity in the appropriate areas.

In 1928 and 1929 the easy money policy brought about speculation in securities. Loans to New York City brokers increased to over $2,000,000,000 and loans to brokers outside of New York went above $1,000,000,000. Accordingly the number of shares traded on the stock exchanges increased tremendously. The Board issued

15 Harris, S. E., p. 142.
16 *The Annalist,* 1927, p. 429.
17 Harris, S. E., op.cit., p. 214.

warnings against this activity, which went unheeded as had the Chicago Bank's warnings in 1920, and as a result many investors, as well as speculators, suffered.

In bringing to an end both of these speculative movements, in 1921 and in 1929, moral suasion played a large part, particularly in the Seventh District. Liquidation was more rapid in 1921 because combined with moral suasion, the discount rate was increased to 7%, whereas in 1929 moral suasion was the only effective factor.

The 1921 rate increases in Chicago effectively checked borrowing, but large reductions were not made until moral pressures was applied by Reserve Bank officers. Pressure for reduction of loans was administered so effectively that during 1921 rediscounts with the Chicago Bank were reduced 60%. The rapid reduction in rediscounts brought protests, particularly from the agricultural areas, which had over-expended. Because of these objections the Board urged that the Chicago Bank reduce its discount rate prior to July 23, 1921, from 6½% to 6% in line with reductions which had been made by New York, Philadelphia and San Francisco. However, the Chicago Bank decided not to reduce its rate, believing that the Board had no right to dictate the policy of a Bank in this respect. Moreover, Mr. George M. Reynolds, a directors of the Chicago Bank, maintained the English view that the discount rate should rule above the market rate. The Chicago Bank desired that the rate in their district should not encourage inflation, the results of which had just been so disastrous.[18]

However, further pressure was brought for a reduction in the Chicago rate and at a special meeting of directors on July 29, 1921, called at the request of the Reserve Board, it was finally decided by a small majority to accede to the Board's request and lower the rate to 6%. This step was taken with great reluctance, some of the directors being in favor of openly defying the Board.[19] It was currently rumored on LaSalle Street that political pressure had been brought to bear on certain of the directors in order that they see reasons for rate reduction.

In 1929, the Chicago Bank was faced with a somewhat different situation. The Federal Reserve Board opposed any such increase in the discount rate as was made in 1921, for fear such a rate would penalize legitimate business. In 1928, however, the Chicago Bank succeeded in getting approval of a 4% rate, forcing New York to raise its rate to 4% in February. On April 20, the Chicago rate was again increased to 4½% and on July 13 to 5%, although there was a ten-day delay between the application for the last

18 *Commercial and Financial Chronicle,* Vol. 113, 1921, p. 476.
19 Ibid., p. 586.

increase and the final approval by the Board. Since the Government was engaging in some refinancing at this time, it was rumored that the delay resulted from the pressure of the Treasury to prevent a rate increase until the refinancing could be completed at a lower rate. This was not the case, however, the delay having been occasioned by the absence from Washington of members of the Board. In fact, Secretary Mellon pressed for the rate increase before the refinancing was complete in order to avoid the very criticism which was presented.[20] Even though discount rates were raised and the portfolios of government bonds of most of the banks exhausted in an attempt to halt the inflationary movement, these measures were of little avail. The only remaining method of coping with the situation resulting from the unfortunate policy of 1927, was the use of moral suasion.

The policy of moral suasion was successful in the Chicago District, but was unsuccessful in the System considered as a whole. In February, 1929, the Board issued a statement that member banks using reserve credit to make speculative loans were beyond their rights; this was merely an announcement that the Board viewed with disfavor the use of facilties of Reserve Banks for speculative purposes. Following this announcement, individual Reserve Banks began to scrutinize their loans more carefully, even, it is said, the New York Bank. However, rediscounts of the System instead of declining, increased from $889,000,000 in February, 1929, to $1,004,000,000 in April. On the other hand, so successful was the Chicago Bank in its efforts to reduce rediscounts by a vigorous policy of increased rates combined with moral suasion, that between February, 1929 (when rediscounts reached the highest point since 1920), and June, rediscounts were reduced $1,000,000,000, and between March and June, 1929, brokers' loans made by Chicago banks decreased $61,000,000, whereas at the same time brokers' loans made by New York banks increased nearly $300,000,000, and those of all member banks, $200,000,000. By September, rediscounts at the Chicago bank were reduced 54% below the March level, while those of the System were increased 10%.

From the experience of the Chicago bank it appears that the speculative mania might have been halted had the policy of moral suasion been administered by all the banks as vigorously and sincerely as by the Chicago bank. However, the Board lacked the means to force the sincere administration of such a policy; moral suasion, being psychological in character, depends for success on the sympathy of the administrator with the policy being administered rather than on rules and stipulations issued by the Board.

On the whole, then, emergency periods which have in general

---

20 Interview with Mr. Edmund Platt, Former Vice-Governor of the Federal Reserve Board.

been encouraged by easy money policies of the Reserve System, have resulted in speculative eras that could be brought to an end only by the use of moral suasion, other weapons having failed.

Bank Failures

In spite of some similar elements in the emergencies of 1920-1921 and 1929-1933, there is a striking dissimilarity in the greater number of bank failures between 1920 and 1921 and 1929 and 1933. The important cause of this difference was the change in investment policy followed by the banks of the country toward increased holdings of long term securities. The drift toward long term investments owned by banks was not offset by a corresponding decrease in deposit turnover.

This change was due in part to the fact that corporations made an effort to relieve themselves of obligations to banks. This settlement of obligations left banks with surplus funds which they either carried as reserves or invested in securities. Since the security market was broadening and banks depended upon market quotations, there was no examination of the actual value of securities held. With liquidity of the banks' portfolios depending upon the stability of the market quotations,[21] when declining security values set in, banks found their assets frozen and experienced difficulty in meeting their obligations. The Reserve Banks, then, were prevented by the terms of the Federal Reserve Act and by current banking practice, from granting aid to distressed banks having such securities for collateral. This inability of the Reserve Banks no doubt accounts for the larger percentage of member bank failures in 1929-1932 than in 1921-1923. (See Table 55.)

Table 55.

BANK FAILURES*

Number of Failures Seventh District Member Banks

Year	
1921	46
1922	25
1923	53
1929	93
1930	75
1931	631
1932	507

21 Willis, H. P. and Chapman, J. M. *"The Banking Situation"*, p. 631.

Percent: 7th District Member Bank Failures of All Seventh District Failures

Year	
1921	11%
1922	12%
1923	6%
1929	20%
1930	12%
1931	17%
1932	19%

Percent: System Member Bank Failures of All Failures in the United States

Year	
1921	14%
1922	9%
1923	19%
1929	12%
1930	14%
1931	24%
1932	22%

*Computed from data published in the Federal Reserve Bulletin.

Although the difference has not been great, on the whole since 1922, the percentage of state member bank failures has been larger than that of national banks. During 1931 and 1932, the capital of failed state banks was slightly more than that of failed national banks. The relatively more numerous failures among state bank members results from the fact that the capitalization of state banks averages smaller than that of national banks (see Chapter II) and from the fact that failures tend to be greater in number among banks of $25,000 capitalization or under, increasing as capitalization decreases.[22] Failures among banks of small capitalization occur because of inadequate resources to sustain heavy losses which in turn are apt to be caused by the small bank's inability to secure capable managers and by lack of opportunity to make a variety of investments. Then, since the increase in long term investments by banks and the consequent decline in paper eligible for rediscount, the Reserve Bank has been unable to extend aid to its smaller as well as its larger members. It should be noted, however that the percentage of failures among member state banks is smaller than that among all state banks, indicating that the Reserve Bank had been of some aid either by maintaining banking standards or by extending direct credit to its state bank members.

22 Willis, H. P. and Chapman, J. M., *"The Banking Situation"*, p. 301.

Table 56.

PERCENT: FAILED NATIONAL AND STATE BANKS, OF NATIONAL AND ALL STATE BANKS*
SEVENTH FEDERAL RESERVE DISTRICT

Number

	1922	1923	1927	1928	1929	1930	1931	1932	1933
National	.1	.1	2.5	1.3	1.3	3.1	8.6	11.6	32.1
State	.5	1.2	2.5	2.1	2.1	6.6	17.0	16.1	25.0
Total	.4	1.02	2.5	1.8	1.7	5.7	15.4	15.2	30.7

Capital

	1922	1923	1927	1928	1929	1930	1931	1932	1933
National	.5	.1	.7	.4	.4	1.4	5.1	8.2	**
State	.2	.5	1.2	.7	.9	3.9	15.2	11.2	**
Total	.2	.3	1.0	.6	.9	2.4	11.6	10.2	**

Deposits

	1922	1923	1927	1928	1929	1930	1931	1932	1933
National	.3	.1	.7	.2	.2	.8	3.1	2.8	10.0
State	.08	.05	.1	.2	1.1	1.0	5.1	5.9	12.0
Total	.1	.2	.5	.2	1.1	1.1	4.4	4.5	11.0

* Computed from data published in the Federal Reserve Bulletin and data furnished by the Statistical Department of the Federal Reserve Bank of Chicago.
** Data not available.

Table 57.

PERCENTAGE OF FAILURES AMONG STATE BANK MEMBERS*
SEVENTH FEDERAL RESERVE DISTRICT

	1922	1923	1927	1928	1029	1930	1931	1932	1933
Number	.3	1.6	2.9	2.9	1.9	1.3	16.0	14.1	**
Capital	.1	.2	.4	.3	.5	.2	5.5	4.0	**
Deposits	.1	.1	.2	.2	.2	1.2	4.2	2.1	**

Table 58.

PERCENTAGE OF FAILURES AMONG ALL MEMBER BANKS
SEVENTH FEDERAL RESERVE DISTRICT

	1922	1923	1927	1928	1029	1930	1931	1932	1933
Number	.4	.5	2.4	1.8	2.2	2.7	9.9	10.9	**
Capital	.1	.1	.6	.3	.3	.8	5.4	5.0	**
Deposits	.1	.4	.3	.1	.2	.6	3.6	2.6	**

* Computed from data published in the Federal Reserve Bulletin and data furnished by the Statistical Department of the Federal Reserve Bank of Chicago.
** Data not available.

The Detroit Emergency

It had been charged that the complete collapse of banking in Detroit in 1933 was due to the inability of the Chicago Reserve Bank or its Detroit branch, to supply Detroit banks with adequate currency. It is true that during the banking holiday in Michigan large amounts of currency were shipped from New York to Michigan banks and large transfers were made through the Detroit branch;[23] however, these operations were simply elements in the process of drawing balances from New York correspondents and did not indicate lack of currency in the Chicago Bank or the Detroit branch.

In fact, throughout the length of the banking crisis, the Chicago Bank carried more Federal Reserve notes on hand than it did in 1932 and the Detroit Branch maintained a larger cash reserve. Although during January and the first week in February, 1933, the amount of Federal Reserve notes on hand at the Chicago Bank had been approximately $20,000,000 less than in the same period during 1932, by the time of the Governor's proclamation establishing a banking holiday in Michigan, the amount had increased to more than $20,000,000 above the amount held during the same period of the previous year, and it continued to increase until the national banking holiday on March 3. This increase in notes on hand at Chicago took place in spite of the fact that a greater currency demand existed in the Seventh District than in any other district of the country; demand for currency in the Chicago District increased $1,000,000,000 over the 1929 level. (See Figure 3)

Moreover, the balance sheet of the Detroit Branch for February, 1933, indicates that rather than a shortage of currency, the cash reserve was more than a million dollars larger than in the same period the previous year; although the gold reserves fell below the 1932 level in February, 1933, there were large increases in currency on hand. On February 1, 1933, legal tender currency was over twice the amount held in 1932 and the amount of silver certificates held was increased by $10,000. On February 15, 1933, the first day of the Michigan banking holiday, the amount of legal tender currency held was over nine times that held on the same date of the previous year, and the amount of silver certificates was over $300,000 larger. It does not appear, therefore, that the difficulty in Detroit and in Michigan resulted from a lack of currency. It is true that the gold reserve at Detroit had been reduced, but the currency on hand was in a much larger quantity than during the same period of the previous year, and the comparatively large quantity held did not indicate a shortage.

The charges, then, that lack of foresight on the part of the management of the Chicago Reserve Bank was the cause of the

[23] Clark, L. E., *"Central Banking Under the Federal Reserve System"*, p. 288.

Detroit banking crisis and consequently the Michigan crisis, are not borne out by the facts. The causes of the Detroit difficulties, namely frozen assets, resulting from unwise and extraordinarily large investments in long term securities and real estate loans, were too fundamental to be alleviated or affected by the quantity of currency carried by the Chicago Bank and the Detroit Branch. (See Chapter VIII)

Table 59.

FEDERAL RESERVE NOTES ON HAND
FEDERAL RESERVE BANK OF CHICAGO*
(000 omitted)

(000 omitted)	1932	1933
January 3	$65,968.5	$39,968.3
February 1	55,735.5	24,125.7
February 15	42,548.0—	59,732.7
February 16	49,653.3	60,674.9
March 1	61,678.6	69,064.5
Marchc 2	50,348.1	79,585.6

* Compiled from the Daily Balance Sheets of the Federal Reserve Bank of Chicago.

Table 60.

CASH RESERVE
DETROIT BRANCH OF THE FEDERAL RESERVE BANK OF CHICAGO*
(000 omitted)

	Legal Tender		Silver Certificates	
	1932	1933	1932	1933
January 3	2,770	2,422	5,228	5,162
February 1	1,997	3,881	5,355	5,365
February 15	466	3,411	4,432	4,749
February 16	200	3,519	3,092	4,852

	Silver Dollars		Gold Reserve		Total	
	1932	1933	1932	1933	1932	1933
January 3	23	245	19,300	20,285	28,116	27,324
February 1	249	232	18,848	19,812	27,415	28,327
February 15	248	234	20,203	18,098	25,350	27,293
February 16	248	234	21,154	18,257	24,605	27,370

* Compiled from the Daily Balance Sheets of the Federal Reserve Bank of Chicago, Detroit Branch.

CREDIT DISTRIBUTION IN THE SEVENTH FEDERAL RESERVE DISTRICT

One of the problems faced by the Reserve Banks in a period of credit demand, which taxes the resources of the banks, is to determine what proportion of the Reserve Banks' resources each member bank is entitled to receive. Such a problem developed in an acute form in 1920 and 1921 when reserves of the Reserve Banks were taxed to the limit and when criticism arose from agricultural areas that they were denied equal access with city banks to the reserve facilities. The Phelan Act, passed in 1920 to solve this problem, was designed to strengthen Section Four of the Federal Reserve Act by requiring non-discrimination in treatment of member banks; the Phelan Act provided for increased or progressive rates as a member bank increased its borrowing. However, this plan was not adopted by all Reserve Banks; the Chicago Bank did not make use of the complete plan although it did calculate a basic line for various sections of the district, namely for country sections and for reserve cities in the various cities of the district, and related this line to the borrowing of all banks in each entire section rather than figuring basic lines for every individual member bank in the district.

Credit Distribution: 1920-1923

In 1921, trouble developed in the Seventh District because of liquidation forced by the Chicago Bank in the face of a decline of prices for farm products and heavy investments in high priced land in some districts. In this situation, liquidation was a difficult and painful process which involved the financial ruin of some individuals who had over-extended their investments.

Complaints concerning forced liquidation came mainly from Iowa and from a few other agricultural sections as well. Senator Brookhart of Iowa, speaking in the Senate as champion of the agricultural interests, held up for criticism the action of the Reserve Bank in loaning money to one large Chicago bank than to all banks in Iowa, the state where so much distress existed, and maintained that reserve credit available for Iowa had been arbitrarily reduced from $91,000,000 to $36,000,000.

Two studies have been made of the situation in the Seventh District, one by the Commission of Agricultural inquiry and the other by Mr. R. R. Pickett of the University of Iowa. The conclusions of these two independent investigations were similar in that both found the Chicago Reserve Bank responsible for the inflationary movement in Iowa and other country districts in 1919 and 1920 permitting, perhaps, a greater expansion of credit in country districts than in city areas; and both studies agree that in the light of declining price levels of 1921, liquidation was carried on too

rapidly in country districts as prices of farm products declined more rapidly than prices of manufactured goods.

Governor McDougal came to the defense of his bank's policy in the January 1932, issue of the Annals of the American Academy of Political Science. He pointed out that the banks in the large agricultural state (evidently Iowa) had borrowed several times their basic line while advances to the largest bank in the district, although larger in actual figures, had not exceeded this bank's basic line to an equal extent; and that consequently there had been no discrimination against the agricultural interests in the district, but, on the contrary, they had actually received larger advances from the Reserve Bank in proportion to their share in the resources of the Chicago Reserve Bank.[25]

This reply of Governor McDougal's has been termed a clever and controversial answer.[26]. However, it seems not so much clever or technical as observed by Pickett, as it does a disclosure and statement of an established credit policy in the passage of the Phelan Act.

An analysis of data relating to borrowing by various sections of the Seventh District indicates that banks in Iowa, as well as other country sections of the Chicago District, were permitted to borrow larger percentages of their basic line than were banks in Chicago, although in actual figures larger amounts were loaned to Chicago banks than to banks in any other section of the District.

Table 61.

PERCENT OF BASIS LINE BORROWED BY BANKS IN SELECTED AREAS*

	1919		1920	
	June	Dec.	June	Dec.
Chicago	**	**	99.0	96.1
Illinois Country	**	**	23.7	42.6
All Iowa Banks	**	**	125.0	261.7
All Indiana Banks	**	**	53.1	56.4
	1921		**1922**	
	June	Dec.	June	Dec.
Chicago	56.1	19.1	2.6	3.6
Illinois Country	36.9	49.5	24.6	17.9
All Iowa Banks	196.0	197.1	99.6	79.6
All Indiana Banks	58.5	47.5	7.1	24.2

* Compiled from data in the Library of the Chicago Federal Reserve Bank.
** Data not available.

24 Report of the Joint Commission of Agricultural Inquire, Vol. II., p. 117. Pickett, R. R., *"Federal Reserve Bank Policy in Iowa"*, p. 117.
25 *Annals of the American Academy of Political Science,* January 1922.
26 Pickett, R. R., op. Cit., p. 53.

If inflation can be measured in various sections of the Seventh District by the proportion of the basic line borrowed by these sections, it appears that the greatest inflation was in the Chicago and Iowa areas because in these sections member banks borrowed larger percentages of their basic lines. It seems correct that this should be the case because the lending of the Reserve Bank to its members permitted more efficient use of deposits, and since the calculation of the basic line was based mainly on the reserve deposits held against member bank deposits, the larger the amount of basic line used, the greater the expansion of deposits and the tendency toward inflation.

Table 62.

PERCENT OF TOTAL AMOUNT LOANED BY THE FEDERAL RESERVE BANK OF CHICAGO, BORROWED BY SELECTED AREAS*

	1919		1920	
	June	Dec.	June	Dec.
Chicago	44%	50%	53%	50%
Illinois Country Banks	3%	2%	2%	4%
All Iowa Banks	11%	16%	15%	20%
All Indiana Banks	9%	6%	6%	5%
	1921		**1922**	
	June	Dec.	June	Dec.
Chicago	30%	22%	11%	**
Illinois Country Banks	3%	9%	12%	**
All Iowa Banks	19%	30%	41%	**
All Indiana Banks	6%	9%	10%	**

* Compiled from data in the Library of the Federal Reserve Bank of Chicago.
** Data not available.

During the deflation period, the reduction of loans was slower in Iowa as a state than in any other state of the district, although the reduction in borrowing of Iowa country banks was more rapid than that of country banks in any other Seventh District country section. (See Table 67.) By June, 1922, all Iowa banks had reduced their borrowing 74% from the October 30, 1920, figure, while other states had reduced borrowing between 81% and 95%. Considering country banks separately, however, it is seen that during this period, Iowa country banks reduced borrowings 56% while other country banks reduced borrowing between 32% and 55%. Although liquidation of the loans made to Iowa banks was not complete until 1925, it appears that Iowa country banks did reduce loans faster than other sections of the district. Data is not available to determine whether this reduction was too rapid

for the welfare of the district, but is certain at least that liquidation was more rapid in Iowa country banks than in any other country section of the district.

It appears, then, that the Commission and Pickett were correct in assuming that the inflated values of Iowa were due, to some extent at least, to the action of the Reserve System and the Chicago Reserve Bank, but that they were not correct in condemning the Chicago Bank for forcing extraordinarily rapid liquidation in all of Iowa since in that state, taken as a whole, liquidation was the least rapid of any of the five states in the district. Iowa country banks were the only group that could complain on the grounds that they were forced to reduce their loans more rapidly between October, 1920, and June, 1922, than any other country section. But it must also be considered that liquidation of loans made to Iowa country banks was not complete until 1925, whereas in other states it was completed in 1922. Therefore, the blanket statement made by the two investigations cited above, does not apply to the entire state of Iowa, but only to the liquidation of Reserve Bank loans to Iowa country banks, liquidation in the state of Iowa as a whole having been slower than average.

Table 63.

PERCENT OF INCREASE OR DECREASE IN MEMBER BANK BORROWINGS AS COMPARED WITH BORROWINGS ON OCTOBER 30, 1920*

(Rediscounts with the Federal Reserve Bank of Chicago)

	ILLINOIS			INDIANA		
	Chicago	Country Banks	Entire State	Indianapolis	Country Banks	Entire State
Jan., 1921	-37%	-23.0%	-30%	- 3%	-15%	-11%
June, 1921	-41%	- 3.6%	-38%	- 4%	-12%	- 7%
Sept., 1921	-74%	- 2.4%	-70%	-49%	-13%	-35%
Dec., 1921	-81%	-30.0%	-55%	-75%	-12%	-50%
Mar., 1922	-91%	- 9.0%	-87%	-79%	- 9%	-60%
June, 1922	-98%	-32.0%	-95%	-97%	-48%	-81%

	MICHIGAN			IOWA		
	Reserve Cities	Country Banks	Entire State	Reserve Cities	Country Banks	Entire State
Jan., 1921	- 3%	-11.0%	- 9%	-13%	- 0.04%	- 4%
June, 1921	-66%	-28.0%	-21%	-37%	-12.0%	-28%
Sept., 1921	-61%	- 5.0%	-55%	-56%	-16.0%	-32%
Dec., 1921	-35%	- 1.4%	-50%	-67%	-22.0%	-39%
Mar., 1922	-72%	-37.0%	-79%	-92%	-48.0%	-65%
June, 1922	-98%	-54.0%	-89%	-94%	-56.0%	-74%

WISCONSIN

	Milwaukee	Country Banks	Entire State
Jan., 1921	-48%	- 0.1%	-40%
June, 1921	-15%	-12.0%	- 3%
Sept., 1921	-27%	-20.0%	-10%
Dec., 1921	-53%	- 6.0%	-43%
March, 1922	-98%	-53.0%	-90%
June, 1922	-94%	-55.0%	-84%

* Computed from data in the Library of the Federal Reserve Bank of Chicago.

Following the dispute of 1921, no more serious protests were made by farmers against the Chicago Bank. However, a Senate resolution in 1922 criticized the Board for not putting progressive rates[27] into effect in the financial centers, namely New York and Chicago. If such a program had been put into effect in 1920 in the Chicago District, the agricultural interests, not the financial interests, would have been penalized since they were the heaviest borrowers in proportion to their basic lines, the basis for setting progressive rates. Progressive rates would have had exactly the opposite result from the effect desired, that is, to penalize speculative borrowing and give agriculture a fair chance to obtain Reserve credit.

Credit Distribution: 1923-1928

After the appeasing of the Iowa farmers in 1921, there was no other complaint regarding the fairness of credit distribution in the Seventh District and at no time was the Chicago Bank forced to reduce its reserve to so low a point as in 1921. From 1923 to June, 1925, a large part of the borrowing from the Reserve Bank was done by country banks, which were still engaged in liquidating their loans accumulated during 1920 and 1921; country banks in Iowa from 1923 to 1935 were particularly large borrowers, borrowing on the average over 30% of their basic line. In 1924, however, borrowing of reserve city banks became more important, banks in Milwaukee, Indianapolis and Detroit increasing their borrowings. By 1926 borrowing in these centers had increased so that by December Detroit banks were borrowing nearly 60% of their basic line and Milwaukee banks, 70%. Although borrowing had increased in Indianapolis, it was not over 30% of the basic line. Increased borrowing in these areas may be accounted for to some extent by business activity and the need of credit to carry increased inventories, particularly in Detroit since the demand for automobiles had declined. The increase in importance of Chicago borrowing may be attributed to similar causes.

In 1927, borrowing for agriculture became more important

27 Harris, S. E., op. cit., Vol. I., p. 122.

again and that of Chicago declined proportionately, although that of reserve cities remained important. Borrowing by reserve cities was due to some extent perhaps to increased speculative demand which began to develop in 1927, while increases in agricultural areas were due to improved agricultural conditions and an increase in business activity in farm areas. In the latter part of 1927 the increased importance of agricultural borrowing resulted from the fact that declining business activity in industrial centers of the district had reduced credit demand in cities, but had not been immediately felt in rural areas. The policy of the Reserve System involving the purchase of government bonds facilitated the reduction of member bank borrowings. In general by the latter part of 1927, borrowings of banks in the various sections of the country had been reduced to but a small per cent of the basic lines, banks in all sections borrowing less than 20% of basic lines during the last quarter year.

Table 64.

BORROWING OF CHICAGO BANKS, RESERVE CITY BANKS AND COUNTRY BANKS
SEVENTH FEDERAL RESERVE DISTRICT
PERCENT OF TOTAL BORROWED IN ENTIRE DISTRICT*

Date	Chicago	Reserve Cities	Country Banks
June, 1923	39%	16%	45%
December, 1923	26%	20%	44%
June, 1924	5%	10%	85%
December, 1924	3%	32%	65%
June, 1925	20%	32%	48%
December, 1925	30%	40%	30%
June, 1926	38%	35%	27%
December, 1926	32%	45%	23%
June, 1927	23%	47%	30%
December, 1927	22%	46%	32%
June, 1928	50%	35%	16%
March, 1929	47%	38%	15%
June, 1929	46%	34%	20%
November, 1929	24%	47%	29%
December, 1929	34%	41%	25%

* Compiled from uncatalogued data in the Library of the Federal Reserve Bank of Chicago.

Credit Distribution: 1928-1929

Borrowing throughout this period followed the same course as in previous periods, Chicago banks and reserve city banks receiving the bulk of loans made by the Reserve Bank and country banks

borrowing a smaller proportion. This distribution resulted largely from demand for speculative purposes and for expanding industrial activity. The decline in importance of Chicago bank borrowing during the latter part of the period was the result of direct pressure by Reserve Bank officers for liquidation of loans, which began in February, 1929, and brought early results.

All reserve cities increased borrowings during this period; of these cities, Milwaukee and Detroit borrowed largest percentages of their basic lines. Increased borrowing of the Chicago banks in late 1929 was partially seasonal and partially resulted from the fact that some banks carried their broker borrowers following the October crash in the stock market. The increased proportion of country banks was largely seasonal but also to some extent resulted from the general reduction of borrowing in cities. (See Table 64)

During this period, the per cent of basic lines borrowed increased; Detroit banks were the heaviest borrowers with nearly 70% of their basic lines borrowed in the latter part of 1928. Banks in all regions increased their use of their basic lines, although in general did not borrow above 60%. Taken as a whole, Wisconsin and Michigan banks were the largest borrowers.

Credit Distribution: 1930-1933

Contrary to the trend in the previous period, country banks became most important borrowers from the Reserve Bank during 1930-1933. Throughout the period in every state of the Seventh District, except Michigan (where borrowing of reserve city banks at times exceeded that of country banks largely because of the borrowing of Detroit banks), country banks received a larger percentage of total loans made by the Reserve Bank than did city banks. Chicago banks did not borrow during 1933 and, in fact after 1929 their borrowings were but a small fraction of the total.

The comparatively large borrowing of country banks was distress borrowing before and after the banking holiday; Michigan country banks continued high borrowings reaching 40% of their basic line in the latter part of 1933, while in other states country bank borrowing was less than 10% of the basic line. The increased importance of reserve city borrowing in 1933, especially February, resulted from a demand for credit from reserve city banks in Detroit only.

The percentages of the basic line borrowed by the various sections of the district during this period were not large, except in 1931 and 1932, when approximately 20% of the basic line, on the average, was used by Seventh District banks. This increased borrowing was due almost wholly to loans made to Michigan banks, both reserve city and country banks. On the whole, the amount of the basic line used during this period was less than in any of the

preceding periods in spite of the fact that it was a period of emergency.

Table 65.

BORROWING OF CHICAGO BANKS, RESERVE CITY BANKS AND COUNTRY BANKS
SEVENTH FEDERAL RESERVE DISTRICT
PERCENT OF TOTAL BORROWED IN ENTIRE DISTRICT*

Date	Chicago	Reserve Cities	Country Banks
June, 1930	3%	17%	80%
December, 1930	2%	32%	66%
June, 1931	10%	18%	72%
December, 1931	9%	60%	31%
June, 1932	30%	29%	41%
December, 1932	1%	9%	90%
June, 1933	--------	21%	79%
February, 1933	--------	49%	51%
December, 1933	--------	3%	97%

* Compiled from unctaalogude data in the Library of the Federal Reserve Bank of Chicago.

Summary

In credit theory, the Federal Reserve Bank of Chicago has always been a conservative, endeavoring from the very first years of operation to maintain a discount rate high enough to prevent borrowing at a profit. The pursuit of this policy has on two occasions, 1921 and 1927, brought the bank into direct conflict with the Federal Reserve Board. Due to the fact that the Board was sufficiently powerful to subdue the rebellious Chicago Bank, the only weapon of control left for the Chicago Bank has been that of moral suasion, which it has used with considerably more success than has been experienced by the rest of the System.

The Chicago Bank has cooperated closely with System policies with the two exceptions cited above. So close has been this cooperation that in "so-called normal times" there has been little divergence in the movement of earning assets. In periods of emergency, however, policies have differed somewhat according as various local problems arose, and as the banking philosophy of the Chicago group and the Federal Reserve Board diverged.

In the meeting of emergencies, mainly not of its own making, the Chicago Bank has provided an abundance of credit, perhaps too much at times such as 1920. In 1921 credit granted expanded so much as to endanger the legal gold reserve of the Bank as some banks, particularly in agricultural sections, were permitted to borrow many times their basic lines. There is little doubt, however,

that this generous policy followed by the Bank saved many over-extended banks. In 1929-1930, the Chicago Bank was in a position to provide even more credit than in 1921, but the mistaken investment policy of most distressed banks had so filled their portfolios with frozen ineligible paper that the Reserve Bank could not give the needed assistance because of the restrictions of the Federal Reserve Act.

The Chicago Bank has been accused of causing the Detroit collapse because through lack of foresight the management had failed to provide the Detroit banks with sufficient currency to meet withdrawals of their customers. Facts do not bear out this accusation for there was an abundance of currency held, both by the Chicago Bank and the Detroit banks. The real difficulty was with investments of the Detroit banks. It must be said, also, that there have been fewer failures proportionately among member than among non-member banks in the Seventh District, so evidently the Chicago Bank has been able to aid its members either directly by loans or by suggestions as to management On the whole, the Chicago Bank has met with a fair degree of success in relieving the stringencies of emergency periods.

In general, the Federal Reserve Bank of Chicago has served the Seventh District exceedingly well, having made available sufficient credit at all times and having met all emergencies with sufficient resources, the failures or inability to make use of these resources having been the fault of banks and not the fault of insufficient funds in the Reserve Bank. The Chicago Bank, however, has been generally too reticent in expressing its views. In 1921, a warning was issued in the monthly bulletin against speculation in land and prior to the 1929-1933 period, the bank had opposed the Board's easy money policy; however, neither these views of the bank's officers nor their reasons for having them, were given sufficient publicity to affect credit demand. Although it is no doubt desirable that there be a great degree of cooperation between Reserve Banks, there should be greater opportunity for statements of position to be made by the separate banks when they differ from System policy. If the Chicago Bank had carried its point in 1927, for example, the history of the United States might have been somewhat different in recent years.

CHAPTER VIII.

THE CHICAGO MONEY MARKET

STRUCTURE AND FEDERAL RESERVE BANK RELATIONSHIP

The introduction of the Federal Reserve System into the banking structure of the United States brought about many changes in the money markets of the country and made possible a measure of control over financial activity in these centers. The power of the Reserve Banks to deal in the open market in government bonds and their right to set their own discount rates, gave the System control to some extent over the amount of cash available for lending and the rates charged for these funds. Also a new element, domestic acceptances, was introduced into the money market; these the Reserve Banks had a right to buy and sell in the open market thereby adding to the control of money market funds.

Under the broad definition of a money market, namely that a money market is a place where banking institutions bring together long and short term funds for distribution to those who successfully bid for their use, there are many money markets in the United States. The principal market is, of course, New York, and less important centers are in the other cities such as Chicago, Detroit, Pittsburgh and St. Louis. None of the interior money markets in any way rival New York and many of them in fact, possess very few features in common with the leading market of the country. Chicago, however, the seat of the second largest money market, possesses many features of the New York market, although on a greatly reduced scale.

The New York Federal Reserve Bank, through its relation with the largest money market in the country, is influential in determining to some extent the policies operating in other money markets. This influence, however, does not represent complete power, especially in the money markets of other Reserve Bank cities and consequently the other Reserve Banks have a share in influencing their respective local markets.

Before examining the relationship of the Chicago Reserve Bank to the Chicago money market, it is pertinent to outline the development and structure of the Chicago money market since no intensive study of this financial center has yet been made.

INDUSTRIAL AND COMMERCIAL RESOURCES OF THE CHICAGO MONEY MARKET

Since every money market is dependent for its existence upon exchanges of goods, services and property rights, the position of

the city in which it is located as a market area is important. The Chicago market area, of which the City of Chicago is the center, extends from the Canadian border on the north, to New Orleans on the south, and from Cleveland on the east to Denver on the west. Within this area, including 1,125,000 square miles and a population of 500,000,000, are situated the most productive agricultural regions and the largest industrial centers of the United States.[1]

This huge area produces a large percentage of the important products of the United States. In 1925 over 50% of the bauxite, iron ore, agricultural implements, automobiles. creamery products, meat packing products, milling products, iron and steel, flaxseed, corn, oats and wheat produced in the United States, came from this Chicago area. Also a large percentage of the nation's production of electrical equipment, railroad cars, boots and shoes, rubber products and various raw materials such as gypsum and lead, are produced in this area.[2]

Chicago is the marketing center of this area because of the efficient transportation facilities which connect the city with every part of the region. Situated as it is at the foot of Lake Michigan, cheap water transportation is provided to many of the northern and eastern sections of this market area while the Mississippi and Illinois Rivers in conjunction with the Illinois and Michigan canal, provide cheap water transportation for the central and southern sections. All these areas and those which have no practical water route to Chicago are also served efficiently by 23 trunk line railroads which center in Chicago.

The rich productive area and the efficient transportation facilities have combined to make Chicago the second largest city in the United States and one of the large manufacturing and commercial centers of the United States. In 1910, Chicago possessed 3% of the horse power and produced 6% of the value of manufactured goods in the United States; in the same year the corresponding percentages for New York City were 2% and 9%. and for Detroit 1% and 1%. In 1930. Chicago had 3½% of the horse power and manufactured 6½% of the value of all goods, while the corresponding percentages for New York were 5% and 13%, and for Detroit were 2% and 3%.[3]

The commerce of Chicago developing around the manufacturing activity has given rise to a great grain exchange and important livestock yards which make Chicago a distributing center for these raw materials. These factors as well as the commerce arising from the purchase of other raw materials for manufacturing and

1 University of Illinois—Bureau of Business Research, Bulletin No. 17.
2 Idem.
3 U. S. Census Bureau Reports 1910 and 1930.

the sale of finished products, result in a large amount of freight entering Chicago and originating in Chicago, making it an important commercial center.

STRUCTURE OF THE CHICAGO MONEY MARKET

The Chicago money market, like the New York market, may be divided into two sections: the short term market, and the capital market; of the two the short-term market is more important.

Of the institutions composing the money market the commercial banks are the most important element. In both the Chicago and the New York market the largest number of banks hold state charters although the largest institutions are national banks. The resources of Chicago commercial banks are about half those of the New York market banks, those of Chicago possessing approximately 8% of the total banking resources of the country and those of New York, 15%. The Chicago commercial banks collect both long and short term funds for the money market through time and demand deposits and use these funds in both markets by investing in real estate and long term securities as well as by lending to their customers for short periods and supplying money to both the New York and Chicago call loan market.

Commercial banks have very little competition from other institutions in the Chicago market; commercial paper houses are of minor importance and there are no accepting institutions other than the commercial banks. The only type of institution which may threaten seriously the commercial banks is the "finance company" which is making large inroads on middle western banks' short term loan business.[4] Three other types of institutions: trust companies and trust departments of commercial banks; building and loan associations; and bond and underwriting houses; deal almost exclusively in the capital market, the collection and distribution of funds being for a period of years rather than for days or months. Trust companies receive their resources from estates or trust funds to be administered; building and loan associations lend almost exclusively on real estate making other investments only when there is a surplus of funds; and bond and underwriting houses are interested mainly in the distribution of securities either to the public or to the banks; all operate almost entirely in the capital market.

In addition to banks and other financial institutions, the exchanges play an important part in the money market. In Chicago there are two important exchanges, the Chicago Stock Ex-

---

[4] In many cases these companies borrow from commercial banks in order to make small loans to their customers at exorbitant interest rates; there are records of 30%-40% interest being charged.
No data is available regarding these lending concerns, but the fact is becoming more and more evident that state regulation is necessary. If and when state regulation is undertaken, data may be available.

change and the Chicago Board of Trade, while in New York there are two security exchanges and five commodity exchanges.[5] The Chicago Stock Exchange does not rival the New York Exchange in size, doing less than one-tenth as much business. The Chicago Exchange as a rival at home in the Security Board of Trade whose activities of trading in the amount of about two million shares a year since organization in 1929 are only infinitesimal compared with those of the New York Exchange and small compared with those of the Chicago Exchange. The Chicago Board of Trade, itself, however, is not rivalled by any commodity exchange in New York in the volume of business transacted.

The institutions regulating the activities of the money market and the demand and supply of funds as expressed by the action of these various components of the market, are the Chicago Clearing House Association and the Federal Reserve Bank of Chicago. Since the advent of the Reserve System the duties of the Clearing House Association in this connection have been taken over largely by the Reserve Bank, which, by virtue of possession of the powers previously discussed, can exercise much greater control than the Chicago Clearing House Association.

Table 66.

STRUCTURE OF THE CHICAGO MONEY MARKET*

Commercial Banks	1910	1913	1920	1925	1929	1933
National	11	9	24	24	49	16
State	50	90	155	177	185	41
Total Commercial Banks	61	99	179	201	234	57
Trust Companies and Trust Departments of Commercial Banks	18	22	32	60	88	58
Building & Loan Associations**	197	365	253	382	440	417

* Compiled from annual reports of the Comptroller of Currency and of the auditor of public accounts of the State of Illinois.
** Compiled from annual reports on building and loan associations of the auditor of the State of Illinois.

SOURCES OF FUNDS

Although strictly speaking, a money market may be divided into a short and a long term market when uses of funds are considered, the sources of funds as divided between these two markets

[5] New York Security Exchanges:
New York Stock Exchange.
New York Curb Exchange.
Commodity Exchanges in New York:
National Metal Exchange.
National Raw Silk Exchange.
Coffee and Sugar Exchange.
New York Producers Exchange.
Rubber Exchange.

is not so clearly defined; commercial banks may invest in long term securities a part of their demand deposits which should properly be used for short term investments, while on the other hand, trust companies or building and loan associations may find it convenient to invest in short term securities. In the light of this situation, the sources of funds of the Chicago money market, i.e., proprietorship funds of commercial banks, deposits of commercial banks, resources of trust companies and of building and loan associations, and the credit available to the Chicago market through the Reserve Bank, will be considered as pouring money into one reservoir from which the various money market divisions obtain the funds for which they successfully bid.

Commercial Banks

Commercial banks provide funds for the money market from two sources: money is provided by bank stockholders, capital surplus and undivided profits, or collectively, proprietorship funds; and secondly, funds are assembled in the form of deposits, demand, time and bankers' balances. All of the proprietorship funds do not find their way into the money market because part of the capital must be used to provide physical equipment for the banks; however, surplus and undivided and part of the capital, no doubt, enter the money market, while all deposits of the three classes named above are available for use by the money market.

The importance of proprietorship items to the Chicago money market is illustrated by Table 67. Between 1910 and 1933, money provided by bank stockholders was relatively more important in the New York money market than in the Chicago market and less important in Detroit than in Chicago. If the Reserve membership in the United States is considered as a whole, proprietorship funds were more important than in any of the three money markets, Chicacgo, New York or Detroit.

The importance of proprietorship funds in all three money markets declined from 1913 to 1925 due to the failure of bank capitalization to keep pace with increasing deposits, but after 1925 increased bank capital and a decreasing rate of deposit increase, permitted capital funds to gain in proportion to deposits. In 1933, proprietorship funds in Chicago decreased in relation to deposits while in both New York and Detroit they increased in importance as compared with 1929. The difference in trend in Chicago was due to failures of large numbers of smaller banks which reduced capital, but had little effect on deposits. In Detroit, the complete reorganization of banks in that city with an adequate buffer against deposits, which they had not possessed before,[5] ac-

6 See Woodworth, G. Walter, *"The Detroit Money Market"*, Chapter IV.

counted for the increased importance of capital funds in relation to deposits. The increased importance in New York of proprietorship funds resulted from decreased deposits while capital remained stable.

Table 67.

SOURCES OF FUNDS, CHICAGO MONEY MARKET*
PROPRIETORSHIP ITEMS OF COMMERCIAL BANKS
(In Millions)

	1910	1913	1920	1925	1929	1933
National Banks	71.6	77.5	129.6	110.6	114.7	163.9
State Banks	64.4	95.2	138.0	210.1	332.2	66.0
Total	136.0	172.7	287.6	320.7	446.9	229.9

PERCENT: PROPRIETORSHIP FUNDS OF DEPOSITS

	1910	1913	1920	1925	1929	1933
Chicago	14.5	16.8	18.9	11.7	16.1	15.4
New York-Central Reserve City Banks	20.1	22.1	16.3	15.1	17.9	18.7
Detroit	------	------	13.4**	11.0	13.8	14.9
All Member Banks	------	------	18.3**	17.2	19.8	20.2

* Compiled from data published in the Annual ReporNts of the Comptroller of the Currency and of the Auditor of the State of Illinois.

** Data for Detroit and All Member Banks taken from "The Detroit Money Market" by G. Walter Woodworth for the years 1920-1929; 1933 figures coNmpiled from the 1933 Report of the Comptroller of Currency and the Auditor' of the State of Illinois.

Commercial Banks also provided funds for the money market by collecting demand deposits, time deposits, bankers' correspondent deposits and government deposits, the first three mentioned being the most important to the money market. In both Chicago and New York from 1910 to 1933 demand deposits have been the most important group of deposits. In Detroit, demand deposits did not compose over 50% of the total deposits until after the reorganization of Detroit banks in 1933. Savings or time deposits were more important in Detroit before 1933 while in Chicago in 1933 they were only about equally important with demand deposits. The bulk of time deposits in Chicago were in state banks while the bulk of demand deposits were in national banks, but despite this division, each was of equal importance in the money market. In New York,

Table 68.

DEPOSITS OF COMMERCIAL BANKS*
CHICAGO MONEY MARKET
(Dollars in millions)

DEMAND DEPOSITS

	1910	1913	1920	1925	1929	1933
National Banks	195.3	215.6	435.4	564.1	510.8	804.3
State Banks	161.1	196.2	500.9	829.6	1039.3	258.7
Total	356.4	411.8	936.3	1393.7	1550.1	1063.0

PERCENT OF TOTAL DEPOSITS

	1910	1913	1920	1925	1929	1933
Chicago	43.8	45.2	60.6	59.8	52.6	43.2
New York	56.2	52.6	62.5	65.8	58.7	65.7
Detroit	------	------	41.7	------	42.3	56.1

SAVINGS DEPOSITS

	1910	1913	1920	1925	1929	1933
National	------	------	40.1	125.9	194.5	277.0
State Banks	201.0	204.0	233.1	483.6	725.3	783.5
Total	201.0	204.0	273.2	608.5	919.8	1060.5

PERCENT OF TOTAL DEPOSITS

	1910	1913	1920	1925	1929	1933
Chicago	2.4	2.2	16.3	25.7	31.2	43.1
New York	------	------	5.5	8.6	13.4	11.7
Detroit	------	------	47.2	------	52.5	2.7

BANKERS' BALANCES

	1910	1913	1920	1925	1929	1933
National Banks	208.2	240.8	273.4	255.6	264.2	242.7
State Banks	39.8	49.4	59.9	107.5	216.6	46.8
Total	248.0	290.2	332.3	362.1	470.8	289.5

PERCENT OF TOTAL DEPOSITS

	1910	1913	1920	1925	1929	1933
Chicago	30.5	31.5	21.5	15.2	16.2	11.5
New York	43.7	46.6	27.9	24.4	27.7	19.3
Detroit	------	------	4.5	------	5.0	13.5

* Compiled from data published in the Reports of the Comptroller of Currency and of the Auditor of the State of Illinois.

"New York" in the above table refers only to Central Reserve City banks as reported by the Comptroller of the Currency.

time deposits, so far as central reserve city national banks are concerned, have been negligible. Like demand deposits, but unlike time deposits, bankers' balances have been important in New York from 1910 to 1933, but their importance in relation to both demand and time deposits has been decreasing since 1913. A decrease in importance of bankers' balances is also to be noted in Chicago. In Detroit, however, bankers' balances now make up a larger proportion of total deposits than at any time since 1920. On the whole, from 1910 to 1933, demand deposits and bankers' balances in Chicago have been the most important sourcce of funds of commercial banks for the money market, with a tendency in recent years for time deposits to displace bankers' balances in importancec. In New York, demand deposits and bankers' balances have and still do compose regularly a larger share of total deposits than is the case in Chicago. In Detroit, the least important money market of the three, time deposits, have been the most important factor in the market, and bankers' balances the least important.

Final sources of funds for the use of the money market are institutions generally interested in long term investments, e.g. building and loan association, trust departments of commercial banks, and trust companies. Resources of building and loan associations have been increasing in the Chicago area since 1920. In 1920, however, resources showed a large decrease due to the lack of building activity during the War, but by 1925 resources were twice as large as in 1913. Since 1929, resources of building and loan associations have declined again, this time as a result of the exigencies of the depression.

Data on the resources of trust companies in Chicago are not available before 1927, but between that year and 1929, trust responsibilities of trust departments and trust companies in Chicago increased by over a billion dollars. Since 1929, there has been a significant movement from trust departments of state banks to those of national banks because of the liquidation of many state banks after 1929 and the absorption of their trust department business by national banks. The tendency therefore was for the trust business of the Chicago area to increase after 1929 and to swing to trust departments of national banks.

Table 69.
BUILDING AND LOAN ASSOCIATIONS*
TOTAL RESOURCES
(In millions)

1910	1913	1920	1925	1929	1933
42.2	45.7	23.0	98.2	125.2	106.6

* Compiled from Annual Reports of the Auditor of the State of Illinois on Building and Loan and Homestead Associations.

Table 70.

LIABILITIES TO TRUSTS OF CHICAGO TRUST COMPANIES*
(In millions)

	1910	1913	1920	1925	1929	1933
Trust Companies of State Banks	**	**	**	**	3980.0	1268.9
Trust Companies of National Banks	**	**	**	**	331.6	3487.8
Non-Banking Trust Companies	**	**	**	**	**	488.7
Total	**	**	**	**	4422.5	5245.4

* Compiled from the Annual Reports of the Auditor of the State of Illinois.
** Data not available.

Federal Reserve Credit Available to the Money Market

One of the purposes of the Federal Reserve System was to concentrate the reserves of the country in Reserve Banks and to make it unnecessary for commercial banks to keep reserves in their vaults. Consequently, when commercial banks have expanded deposits to such an extent that their reserves with the Reserve Bank are reduced to the legal limit, they must either borrow from or rediscount with the Reserve Bank, or reduce their loans. Although generally the former course is preferred, the lending power of the Reserve Bank is not limitless but is restricted by the reserve requirements of the Reserve Act and by the necessity of extending equal privileges to all banks of the district. What determines, therefore. the amount of credit that will be extended to such a group of banks as those composing the Chicago money market? Since commercial member banks are the most important group of institutions in the Chicago market the reserve credit available to those banks will be an important criterion of the reserve credit available to the market.

The reserve credit due to various sections of the Seventh District is determined by the Federal Reserve Bank of Chicago according to the basic line method computed as described above.[7] However, it should be remembered that it is not the practise of the Chicago Bank to adhere strictly to the limits prescribed by this computation but to use it only as a criterion of credit within the district. Since the basic line is computed in such a way that reserve deposits are one of the most important elements in the calculation, the basic line of the Chicago Reserve Bank provides an estimate of the Federal Reserve credit available to the Chicago money market because the open market purchases or sales of securties and the changes in credit granted by member banks affect reserve deposits

[7] Supra Chapter VII.

directly. Any action of the system or of the Chicago Bank is therefore reflected in the basic line of commercial banks because of changes in reserve deposits by those member banks.

An examination of Table 71 indicates credit aavilable to the Chicago money market increased 43% between 1920 and January 1928, and that credit available to the district as a whole increased 34% during the same period. After 1928, the basic line of the various borrowing banks declined so that by the end of 1933, the basic line of Chicago banks was 0.6% less than at the date of first computation in April, 1920, while the basic line of the district as a whole was 24% less.

Table 71.

RESERVE CREDIT AVAILABLE TO MEMBER BANKS*
CHICAGO MONEY MARKET
BASIC LINE OF CHICAGO BANKS
(In millions)

	1920	1921	1922	1923	1924	1925	1926
January	**	218	215	242	243	283	291
February	**	221	214	249	245	290	290
March	**	223	222	247	245	283	290
April	**	223	224	243	248	283	288
May	230	214	220	245	244	273	283
June	231	218	237	250	254	280	289
July	231	218	232	245	260	286	291
August	233	211	**	242	268	286	292
September	231	216	**	239	280	286	300
October	230	218	**	246	292	286	300
November	229	217	**	240	298	292	304
December	224	215	**	238	286	292	298
	1927	**1928**	**1929**	**1930**	**1931**	**1932**	**1933**
January	299	329	325	315	336	260	220
February	295	329	322	307	326	252	229
March	294	320	318	297	324	245	225
April	303	321	310	297	307	240	198
May	291	320	308	317	310	224	201
June	231	218	237	250	254	280	289
July	231	218	232	245	260	286	291
August	298	317	309	329	291	200	253
September	292	313	318	329	290	202	250
October	311	320	318	325	289	206	256
November	313	323	321	322	277	216	260
December	313	323	321	322	277	216	260

* Compiled from uncatalogued data in the Library of the Federal Reserve.
** Data not available.

The Chicago money market is evidently, therefore, provided by the Reserve Bank with a comparatively stable reserve supply of credit upon which it may draw if and when necessary. In cases of emergency, if the credit allotted to those banks composing the market has been exhausted, these banks may be allowed to borrow beyond their basic line in order to ease the situation until the crisis has passed. The question of the adequacy of the reserve credit assured to the Chicago money market will be discussed later in this chapter.

Ebb and Flow of Funds

The supply of funds in a money market is not constant, but varies in accordance with changes in various economic factors. In the New York money market, movements of funds are due to six factors: (1) trade in commodities; (2) trade in securities; (3) trade in equities of enterprises in the form of interest and dividends; (5) government fiscal operations; and (6) financial operations for maintaining the equilibrium of the market.[8]

Although the same factors operate to affect the movement of funds into and out of the Chicago money market, the most important in Chicago are trading in commodities and government fiscal operations. The former is important because Chicago is the distributing and manufacturing center of the entire middle western district and is the market in which the raw materials of the western and southwestern farming sections are exchanged for manufactured products. Government transfers, another important item influencing ebb and flow of funds in the Chicago market, are occasioned by transfers of government funds made by the Treasurer of the United States in order to equalize excess deposits at some points with lower deposits at points where expenditures make further deposits necessary, and in order to prevent collection of too large a part of the nation's gold supply in any one district or city.

Trading in securities and equities in securities, and payment of dividends and interest are not so important in Chicago as in New York since the size of the Chicago security market and its trading volume in no way compares with the size and volume of New York's security market. With the largest security market in New York, it is natural that corporations maintain banking connections in that city and distribute dividends and interest from that center whereas the amount of dividends and interest distributed from Chicago is small.[9] However, trading in equities in commodities is more important at Chicago because of activity on the Chicago Board of Trade.

---

8 Beckhart, B. H., *"The New York Money Market"*, Vol. II., p. 295.
9 University of Illinois, Bureau of Business Research, Bulletin No. 39.

Through the operations of these various factors, Chicago has gained gold from some districts and lost to others in the domestic movement of funds.[10] In general, the Boston, Philadelphia, Cleveland, Minneapolis and Kansas City districts have gained gold from Chicago while Chicago has gained gold from the other districts. Gains and losses have been due almost entirely to transit clearings in all districts, the movements resulting from government transfers; Federal Reserve notes being negligible in comparison. However, in the Chicago District, government transfers on the whole have offset the net inflow of gold. The situation of New York was the reverse, the New York District losing through transit clearings and gaining by government transfers. Federal Reserve note clearings were also more important in the New York than the Chicago District: the former gained gold by exchange of notes whereas Chicago lost practically as much as was gained.

The movement of transit clearings in favor of Chicago resulted from the sale of manufactured goods as well as raw products; for example, the gain from New York resulted from sale of automobiles, grain and grain mill products.[11]

Losses through transit clearings resulted from a greater volume of purchases being made by Chicago in the districts to which Chicago lost, than the volume which Chicago sold in those districts. For example, unfavorable clearing balances in the gold settlement funds have resulted from the following transactions between Chicago and other districts: from Kansas City and Minneapolis, purchases of wheat and cattle; from Cleveland, purchases of steel and rubber products; and from New England, purchases of textiles and sea food products.

The movement of Federal Reserve notes has not corresponded with that of transit clearings. Note clearings in those districts to which Chicago lost gold through transit clearings, were favorable to Chicago, whereas in districts from which Chicago gained by transit clearings, (except Atlanta and San Francisco) the movement of Federal Reserve notes was unfavorable to Chicago. No explanation of this situation has been offered except the existence of tourist travel and local trading areas near district borders. However, the fact that the Chicago Bank generally has a larger amount of notes in circulation than most of the other banks would tend to give note clearing for Chicago an unfavorable trend.

USES OF FUNDS

The uses of funds which come into the Chicago money market

10 The foreign movement is not important in Chicago as the actual movement usually takes place through New York.

11 Beckhart, B. H., Vol. II., p. 367.

are many and varied, but in general funds are invested in the two markets, the capital market and the short-term money market. Investments in the capital market are made in real estate, bonds, stocks and government bonds; short term investments generally are bank loans to customers, purchases of commercial paper and acceptances. The call loans made in Chicago are only a minor portion of short term investments.

The Capital Market

The funds which enter the capital market are used either for investment in stocks and bonds of industrial corporations, government bonds or real estate. The inclusion of the last two types of investment in the category of a capital market may be open to question but investments in government bonds are really long term investments even though they are more readily marketable than industrial bonds; in fact, the government in many cases uses the proceeds from the sale of these bonds as capital. Real estate has been included in this category also because since the time of Alfred Marshall[12] land has been considered by many economists as similar in nature to capital.

Since a large part of money market funds are provided by commercial banks, their investment in the capital market will be significant of the amount of funds entering the capital market from this source. Chicago banks have generally placed a larger percentage of their total loans and investments in the capital market than have New York banks and the proportion of long term investments in relation to short term loans. This increase has been the largest in the Chicago money market and the smallest in Detroit.

The distribution of long term investments among industrial stocks and bonds, government bonds and real estate, has varied in the Chicago and New York markets. Chicago Commercial banks have invested a majority of their funds in industrial and local government issues whereas New York banks have tended to choose United States government securities. However, there appears to be a trend towards a common policy in both groups of banks for Chicago investments in industrial have declined in importance while government bond investments have increased proportionately. Real estate owned by banks in the New York and Chicago areas has been unimportant throughout the period of the Reserve System's operation, with a tendency towards increasing importance in the later years.

---

12 See Alfred Marshall, *"Principles of Economics"*, p. 430.

Table 72.

USES OF FUNDS

THE CAPITAL MARKET OF THE CHICAGO MONEY MARKET

(Dollars in millions)

Investments in Government Securities (in millions)*

	1910	1913	1920	1925	1929	1935
National Banks	.7	23.4	34.9	67.2	31.9	192.8
State Banks	.8	.5	34.5	166.9	121.8	76.8
Total	1.5	23.9	69.4	234.1	153.7	269.7

Percent: Government Bonds of Total Investment

	1910	1913	1920	1925	1929	1935
New York	1%	13%	27%	35%	27%	43%
New York	1%	14%	52%	58%	57%	50%

Investments of Building and Loan Associations in Chicago*

(In millions)

	1910	1913	1920	1925	1929	1935
Mortgage Loan Investments	42,254	21,220	37,545	93,454	116,562	84,708

Percent: Mortgage Loan Investments of Total Building and Loan Investments

1910	1913	1920	1925	1929	1935
93%	91%	88%	95%	93%	79%

Percent: Real Estate Investment of Total Building and Loan Investment

1910	1913	1920	1925	1929	1935
1%	1%	2%	1%	3%	5%

TABLE 72—Continued on Page 198

TABLE 72—Continued From Page 197

Resources of Trust Departments and Trust Companies in Chicago***

(In millions)

	1910	1913	1920	1925	1929	1935
Personal Property	—	—	—	—	4230.7	5029.4
Cash	—	—	—	—	58.4	78.4
Real Estate	—	—	—	—	119.8	127.6
Percent: Personal Property of Total Resources	—	—	—	—	95%	97%
Percent: Real Estate of Total Resources	—	—	—	—	3%	2%

* Data compiled from Annual Reports of the Comptroller of Currency and of the Auditor of Public Accounts of the State of Illinois.
** Compiled from Annual Reports of Building and Loan Associations reported by the Auditor of Public Accounts of the State of Illinois.
*** Compiled from Annual Reports of the Auditor of Public Accounts of the State of Illinois.
— Data not available.

Table 73.

USES OF FUNDS*

THE CAPITAL MARKET OF THE CHICAGO MONEY MARKET

(Dollars in millions)

Loans and Investments

	1910	1913	1920	1925	1929	1933
National Banks	349.3	379.1	677.8	842.5	764.0	978.2
State Banks	337.4	479.3	810.1	1526.5	1927.5	435.3
Total	706.7	858.4	1487.9	2369.0	2691.5	1413.5

Percent: Loans, Discounts and Investments of Total Investments

	1910	1913	1920	1925	1929	1933
Chicago	16%	19%	16%	24%	21%	44%
New York	21%	19%	12%	21%	24%	35%
Detroit			20%	28%	24%	28%

Real Estate

	1910	1913	1920	1925	1929	1933
National Banks	.07	.05	.23	.9	.8	4.1
State Banks	.29	.22	.48	1.9	2.8	9.7
Total	.36	.28	.71	2.8	3.6	13.8

Percent: Real Estate of Total Investments

	1910	1913	1920	1925	1929	1933
Chicago	.2%	.3%	2.0%	.7%	.6%	2.1%
New York	(——less than 0.5%——)				1.0%	1.0%

Securities Other Than Government Bonds

	1910	1913	1920	1925	1929	1933
National Banks	44.5	43.8	46.4	76.1	87.6	148.5
State Banks	71.3	115.3	145.1	272.6	322.9	89.2
Total	115.8	159.1	191.5	348.7	410.5	237.7

Percent: Securities Other Than Government Bonds of Total Investments

	1910	1913	1920	1925	1929	1933
Chicago	98%	86%	71%	60%	71%	54%
New York	98%	85%	47%	41%	40%	48%

* Compiled from data published in the Annual Reports of the Comptroller of the Currency and the Auditor of the State of Illinois.
Data for New York City is for Central Reserve City banks.

Other important sources of investment funds for the capital market are building and loan associations and trust companies. The bulk of building and loan association resources are invested in land or the improvement of land whereas a smaller percent is in real estate directly and in securities both government and industrial. The lack of demand for loans in recent years has diminished the proportion of total assets invested in mortgage loans and larger sums have been held in cash or placed directly into other channels of investment.

The amount of funds invested in capital by trust companies cannot be determined, but it is safe to assume that a large percent of items listed under "Personal Property" are long term securities. Between 1929 and 1933, the tendency has been to increase the amount of "Personal Property" held by the Trusts and to decrease the real estate proportionately.

Another important group of institutions connected with the capital market are the security houses which act mainly as distributors of securities to investors and purchase only for a short period issues or parts of issues. In 1902 ther were 70 of these houses operating in the Chicago market; by 1930 there were 487 and by 1933 the number had decreased to 40. These houses dealt in securities of the lumber and paper industries, public utilities, real estate bonds, municipal bonds and bank stocks.[13] In 1900 Chicago

[13] University of Illinois, Bureau of Business Research, Bulletin No. 39.

security houses offered for sale 12 issues amounting to $7,-320,000 sponsored solely by them or by syndicates headed by them. In 1920, this number of originations had increased to 128 and the amount to $58,941,000 but in 1930 there were only 93 issues sponsored solely by Chicago houses with a value of $554,758,000. The majority of issues in all years were public utilities and industrials.[14] Besides originating issues the Chicago houses also participated in originations in other cities. In 1921 $853,071,000 in issues were participated in by Chicago houses and in 1927, $1,494,400, the largest amount during the decade 1920-1930.[15]

In 1921, 36.7% of the volume of securities issued in the United States were either originated by Chicago houses or participated in by them.[16] This proportion increased until 1926 when 30.1% of all issues were handled wholly or partially by Chicago houses. After that year the proportion declined until in 1930, the high point of the decade, 32.2% of all issues in the United States were related by either origination or participation to Chicago houses. After 1930 both the United States as a whole and in Chicago, issues declined to an almost negligible amount, but Chicago houses have maintained their relative position in originations and participations.[16]

The Short Term Money Market

The short term money market may be divided into two divisions: the customers' market and the open market. In the former, the customer deals directly with the lending agency in negotiating his loan whereas in the open market, funds are bought and sold without direct contact between lender and borrower. The more important of the two markets in Chicago is the customers market.

The Customers Market

Loans to customers may be divided into three classes: loans on collateral security, loans on real estate, and "all other loans." From 1910 to 1933, state banks in Chicago made the larger percent of total loans and discounts of Chicago banks, but in 1933 national banks assumed the ascendancy. After 1920, over 50% of loans and discounts made by banks in the Chicago money market were on collateral security of stocks, bonds or personal property whereas before 1920, loans had been made, on other security, generally promissory notes, without requiring collateral. In New York the tendency has been the opposite: most of the loans made in 1913 or before were on collateral security whereas from 1920 to 1929 other types of paper were preferred; however, in 1923 the

14 Idem.
15 Idem.
16 Computed from data published in the *"Security Dealers of North America"* and the *"Commercial and Financial Chronicle"*.

majority of loans were again on collateral security. In Detroit loans on collateral security were of minor importance until 1933 when forced reductions of loans on real estate, which the old

Table 74.

USE OF FUNDS, LOANS AND DISCOUNTS
CHICAGO MONEY MARKET*

Total Loans and Discounts

	1910	1913	1920	1925	1929	1933
National Banks	284.1	330.1	617.0	687.0	619.6	613.1
State Banks	311.8	364.4	620.1	1087.1	1480.1	179.5
Total	595.9	694.5	1237.1	1774.1	2099.7	792.6

Percent Loans on Collateral Security of Total Loans and Discounts

	1910	1913	1920	1925	1929	1933
Chicago	29%	45%	61%	63%	56%	56.1%
New York	57%	57%	33%	48%	49%	55.0%
Detroit	**	**	50%	24%	32%	59.0%***

Percent: Loans on Real Estate Security of Total Loans and Discounts

	1910	1913	1920	1925	1929	1933
Chicago	**	**	7%	9%	8%	7%
New York	**	**	(Less than 1%	(None)	7%	9%
Detroit	**	**	29%	40%	35%	21%***

Percent: All Other Loans of Total Loans and Discounts

Chicago	**	**	32%	28%	37%	37%
New York	**	**	67%	52%	40%	32%
Detroit	**	**	51%	36%	34%	20%***

* Compiled from data published by the Comptroller of the Currency and of the Auditor of the State of Illinois.
** Data not available.
*** Data for Detroit taken from "The Detroit Money Market" by H. G. Woodworth.

Detroit banks had held were made by the reorganization of banks in that city. Loans with real estate collateral, both farm and urban, were of relatively minor importance in both Chicago and New York, although of somewhat greater importance in Chicago.

The Open Market: The Call Loan Market

The Chicago Call Loan Market has neither been purely an open market nor a customers' market. Two attempts have been made to

establish a money desk in the Chicago Stock Exchange but neither has been successful. The first attempt, made in 1923, did not reach the state of actually establishing the desk and although the second attempt in 1928 successfully established the desk, it operated only until 1931. Loans made through this desk amounted to only a small fraction of those made in New York, but the Chicago banks soon complained that all the money made available was not loaned because of a lack of demand. Another complaint was that rates were higher in the New York market. On the brokers' side, the complaint was that Chicago banks demanded that a large percent of the collateral security be those securities with listings on the New York Exchange because its market was much wider and such collateral was therefore more liquid. This dissatisfaction on both sides caused the money desk to be finally discontinued although both brokers and bankers admit the need and the possibility of a successful money desk.[17]

As a result of these failures to establish an open market in "call" funds, demand loans of Chicago banks are customers' loans. Generally since 1910, Chicago banks have made a smaller percent of demand loans than New York banks. Chicago banks, from 1910 to 1925 made approximately 25% of total loans and discounts on demand and New York banks between 30% and 50%; in 1929, the

Table 75.

BROKERS LOANS*

Date	Brokers Loans Made by Chicago Banks (Millions of Dollars)	Percent of Chicago Banks' Brokers Loans Made: In New York	Outside New York	Percent of All Member Bank Brokers Loans Made by: Chicago Banks	New York Banks
1928					
Dec. 3	371	32	68	14	35
Dec. 31	384	20	80	11	49
1929					
March 27	329	6	94	18	60
June 29	290	18	82	10	49
Oct. 4	316	16	84	10	42
Dec. 31	251	3	97	10	51

17 Interviews with officials of the Chicago Stock Exchange and with Loop bankers.

1930					
March 27	334	42	58	10	75
June 30	328	30	70	10	59
Sept. 24	472	50	50	19	70
Dec. 31	246	20	80	11	60
1931					
March 25	270	41	59	12	69
June 30	184	29	71	10	63
Sept. 29	184	14	86	12	67
Dec. 21	127	3	97	13	65
1932					
June 30	113	0.9	99	24	70
Sept. 30	109	1	99	17	84
Dec. 31	87	1	99	15	84
1933					
June 30	117	11	89	12	79
Oct. 25	175	9	91	19	73
Dec. 30	52	25	75	5	74

* Compiled from data published in the Annual Report of the Federal Reserve Board 1933.

Table 76.

PERCENT: DEMAND LOANS (NATIONAL BANKS) OF TOTAL LOANS AND DISCOUNTS*

	Chicago	New York
1913	21%	38%
1920	28%	29%
1925	25%	29%
1929	40%	58%
1933	7%	53%

* Compiled from the Annual Reports of the Comptroller of the Currency and the Federal Reserve Board.

Chicago proportion of demand loans and discounts increased to 40%. By 1933, however, with the decline of speculation in securities, only 7% of all loans and discounts of Chicago banks were demand loans. The decline in New York was not as precipitous from 1929 when 53% of loans and discounts were lent on call. Since data on brokers' demand loans have been available, New York banks have made a larger share of brokers' loans made by all member banks than have Chicago banks, New York banks making from 35% to 85% of the total and Chicago banks from 5% to 24%. Chicago banks

made their largest loans, proportionately, in June 1932 and New York banks in December, 1932; Chicago banks made their smallest share of brokers loans in December 1933 and New York banks in October 1928.

Of brokers' loans made by Chicago banks, the majority has been outside New York City. On October 3, 1928, 32% of Chicago banks' brokers' loans were made in New York; on March 27, 1930 the percentage was 42%, and on September 24, 1930, 50%. These were the only times when New York brokers were enabled to use a large share of the Chicago funds available for brokers' loans. Except on September 24, 1930, the majority of brokers' loans made by Chicago banks were made outside New York and presumably in Chicago. During the period of greatest speculation in 1928 and 1929 between 80% and 90% of brokers' loans made by Chicago banks were in Chicago. Between 1930 and 1930, there was a tendency to increase brokers' loans in New York, but by 1932 practically all of the brokers' loans made by Chicago banks were made to brokers outside New York.

The Open Market: The Commercial Paper Market

Since the Call Loan Market as an open market is not important in Chicago, there are just two types of paper for which an open market exists: commercial paper and acceptances.

The United States is the only country having a commercial paper market. This institution is based on the supply and demand for unsecured promissory notes of firms with high credit rating. The makers of these notes sell their pledges to commercial paper houses, which in turn sell the paper to investors, generally not endorsing the paper, but guaranteeing the signature. There is no standardized method of conducting these sales; some firms use salesmen, the more expensive method, and others circularize banks and other investors. In any case sales are usually made on a time option basis either to banks or to individuals so that the purchaser may have time to make a credit study before final acceptance of the paper.[17]

The commercial paper market serves firms of medium size most advantageously, whereas small firms borrow locally and large firms rely on stock and bond sales. The size of business firm which generally borrowed on the commercial paper market before 1924 had a net worth ranging from $1,000,000 to $2,500,000, but since 1924 there has been a tendency for this average size to increase, the largest number of borrowers having a net worth of from $2,500,000 to $5,000,000 in 1930.[18]

[17] Beckhart, B. H., *"The New York Money Market"*, Vol. III, Chapter VIII.
[18] Idem.

The largest number of borrowing firms is located in the Chicago Federal Reserve District where 456 firms, or 18.1 of all firms in the country using the commercial paper market, are located. The New York District has the second largest number of commercial paper borrowers, 390 firms, or 15.5% of the total for the entire country.[19]

The majority of borrowers in the Chicago District were firms engaged in various branches of metal industries; manufacturers of foodstuffs and textile manufacturers were second and third in importance. In the New York District, firms in the textile and metal industries were the most important commercial paper market borrowers from the standpoint of numbers. Other industries in which firms borrowed on the open market were lumber, leather, chemicals, paper, tobacco and building materials. Finance companies, 19 in Chicago and 11 in New York, also have used this market.[20]

Rates on commercial paper have generally been higher in Chicago than in New York, and lower in Chicago than in Detroit. Between January 1925 and December 1928, interest rates on commercial paper in New York ranged between 4% and 4.75%; in Chicago between 4.5% and 4.75% and in Detroit between 5.25% and 5.5%. Rates in all three markets advanced during 1928 and 1929 until interest rates on prime commercial paper reached 6.25% in Chicago, 6% in New York and 6.75% in Detroit. This relative position of interest rates was maintained in the decline after 1929. However, in the latter part of 1931 when the decline in rates ended, the Chicago interest rate had fallen to 3.5%, and the New York rate to 3%, whereas the Detroit rate had dropped to only 4.75%.[21]

The proportion of commercial bills to total loans and investments has been greater in New York than in Chicago, although in both 1929 and 1933 this proportion was less than 1% in both centers.

The Open Market: The Acceptance Market

The other type of credit instrument for which there is an open market in Chicago is the bankers' acceptance. Use of the bankers' acceptance in American business is of recent origin; although acceptances have been used widely abroad, United States national banks and many state banks were prohibited from creating them until the passage of the Federal Reserve Act. The framers

---

19 Foulke, R. A., *'The Commercial Paper Market"*, P. 43.
20 Read, L. M., *"Story of Commercial Paper"*.
21 For complete graphs of these movements, see Woodworth, G. H., *"The Detroit Money Market"*, P. 365.

of the Federal Reserve Act set out to legalize and promote the use of acceptances and consequently the Act dealt specifically with their use. It gave the accepting right to national banks as well as to state member banks if the permission did not controvene state law. Accepting banks were permitted by the original Act and by subsequent amendments to accept bills arising out of importation and exportation of gold, domestic shipments and storage of goods, preferably marketable staples, and those bills intended to create dollar exchange. In the first three types, i.e., bills arising out of importation, exportation and storage of goods, the time limit for acceptance was six months, and in the case of the last type, three months. The total amount which one bank could accept (outstanding at one time) could not exceed 50% of the capital and surplus of the bank unless permission were granted by the Federal Reserve Board. The Board granted permission to accept up to 100% of capital and surplus if surplus of the accepting bank equalled 20% of the capital. This permission, however, was not without its restrictions for not more than 50% of the total amount of acceptances outstanding could be for domestic transactions. There was no limit to the aggregate amount which could be accepted for one interest so long as a bank were adequately secured throughout the life of the transaction; otherwise the limit was 10% of the capital and surplus of the accepting bank.[22]

Under the legal provisions of the Federal Reserve Act and with encouragement by the Federal Reserve Board, the use of acceptances in the practise of financing business extended in the United States. Institutions which became engaged in accepting, were national and state banks, trust companies, private banks, acceptance corporations, and branches of foreign banks.

In Chicago in 1933 the bulk of accepting was done by two national banks and three trust companies, which was a shift from the 1929 situation when five national banks and one trust company accepted in Chicago; between 1929 and 1933 one national bank was absorbed and one national bank and trust company merged and subsequently failed. In 1933 the three trust companies which were listed among the first 100 accepting banks did not appear in the 1929 list, the accepting business of these institutions having grown from practically nothing to comparatively large proportions in three years. Three of the accepting banks had acceptances outstanding in amounts to rank them among the first forty banks in both 1929 and 1933; the two national banks were the most important acceptors

22 For a complete summary of the legal regulations of acceptance practise and rulings of the Federal Reserve Board, see Beckhart, B. H.., *"The New York Money Market"*, Vol. III, Chapter X.

Table 77.

ACCEPTING BANKS IN THE CITY OF CHICAGO RANK AMONG FIRST 100 ACCEPTING BANKS OF THE UNITED STATES*

Bank	Rank in 1929	Rank in 1933
Continental Illinois National Bank and Trust Company	10	9
First National Bank of Chicago	19	16
National Bank of the Republic	32	**
Foreman National Bank	46	**
Central Trust Company of Illinois	73	**
Harris Trust Company	----	40
City Trust Company	----	73
Northern Trust Company	----	79

* Compiled from the *Bulletin* of the American Acceptance Council.
** Not in existence as a separate entity.

One of the two important money markets, Chicago and New York, the latter is by far the more important accepting center, making approximately three-fourths of the acceptances made in the country, whereas Chicago makes only approximately one-twentieth. In the first part of 1929 there was a tendency for the acceptances of Chicago and New York to decline proportionally because of increased accepting activity by banks outside these centers, but by December of that year, with the general declining business activity, banks in these two markets regained their former positions; by December 1933, the making of acceptances showed a tendency to concentrate still more in these two centers.

Although the central reserve city banks in Chicago and New York make nearly 90% of acceptances in the country, the liability of customers on account of acceptances are only a small percent of the total loans and discounts of these two groups of banks. In New York acceptances have been from 5% to 23% of loans and discounts, and in Chicago from 1% to 8%. In December, 1929, the proportion of customers' liability on account of acceptances was largest in both groups of banks as bank failures and the need of husbanding resources in other centers forced increased acceptance business into Chicago and New York.

The transactions which gave rise to acceptances in these two money markets were not altogether similar. In Chicago in 1925, the majority of acceptances arose from export business and warehouse storage whereas in New York the import and export busi-

ness gave rise to the majority. By 1929, however, imports as origins of acceptances had replaced exports in importance in Chicago, and acceptances based on goods stored or in shipment in foreign countries were most important. In New York, import and export business continued to be most important during 1929. By 1933, although acceptances arising out of exports were still important, those arising from warehoused products and goods stored or in shipment in foreign countries assumed a larger proportion of the total in both New York and Chicago. Although acceptances continued to arise from other transactions also to some extent, these declining in importance particularly in the Chicago District.

The shift in importance of acceptances on imports and exports was due largely to the decline in foreign trade. This shift was more in evidence in Chicago because of the fact that demand for acceptances to finance foreign trade was always less there than in New York and any reduction in trade therefore reduced the demand at Chicago by a greater percent. The increased importance proportionally of warehoused products in Chicago resulted from the fact that as a great storage center for grain and other western products, Chicago experienced greater increased demand for credit on stored goods than in New York. The increased importance of acceptances based on goods in foreign countries was due probably to high tariffs causing the development of branches of American concerns in foreign countries, these firms continuing, however, to finance themselves through their American banking connections.

Table 78.

PERCENT: ACCEPTANCE LIABILITY TO TOTAL LOANS AND DISCOUNTS OF CENTRAL RESERVE CITY BANKS IN CHICAGO AND NEW YORK*

	Chicago	New York
June, 1920	7%	9%
December, 1920	5%	10%
June, 1925	1%	5%
December, 1925	2%	8%
June, 1929	8%	23%
December, 1929	8%	23%
June, 1933	4%	11%
December, 1933	3%	10%

* Compiled from data published in the Annual Reporst of the Comprtoller of Currency.

Table 79.

PERCENT: ACCEPTANCES ISSUED BY CENTRAL RESERVE CITY BANKS IN CHICAGO AND NEW YORK, OF TOTAL ACCEPTANCES OUTSTANDING*

June, 1925	4%	74%
December, 1925	4%	75%
June, 1929	3%	63%
December, 1929	5%	80%
June, 1933	5%	70%
December, 1933	6%	81%

* Compiled from data published in the American Acceptance Bulletin.

Table 80.

CLASSIFICATION OF ACCEPTANCES ISSUED IN THE CHICAGO AND NEW YORK FEDERAL RESERVE DISTRICTS PERCENT: ACCEPTANCES OF EACH CLASS TO TOTAL ACCEPTANCES ISSUED*

	Imports	Exports	Domestic
June, 1925			
Chicago	26%	38%	6%
New York	40%	40%	5%
December, 1925			
Chicago	26%	49%	12%
New York	40%	42%	2%
June, 1929			
Chicago	19%	6%	3%
New York	20%	78%	1%
December, 1929			
Chicago	9%	4%	3%
New York	23%	35%	4%
June, 1933			
Chicago	8%	1%	
New York	10%	29%	2%
December, 1933			
Chicago	8%	1%	
New York	12%	30%	3%

TABLE 80—Continued on Page 210

TABLE 80—Continued From Page 209

	Warehouse	Dollar Exchange	Goods Stored or in Shipment Between Foreign Countries
June, 1925			
Chicago	30%	--------	--------
New York	10%	3%	2%
December, 1925			
Chicago	13%	--------	--------
New York	9%	3%	4%
June, 1929			
Chicago	30%	--------	43%
New York	5%	6%	21%
December, 1929			
Chicago	44%	--------	40%
New York	11%	6%	21%
June, 1933			
Chicago	42%	--------	48%
New York	25%	4%	31%
December, 1933			
Chicago	59%	--------	31%
New York	32%	1%	22%

*'Compiled from data published in the American Acceptance Bulletin.

Table 81.

INVESTMENT DEMAND FOR ACCEPTANCES
SEVENTH FEDERAL RESERVE DISTRICT*
(In million dollars)

	1922	1925	1929	1933
Own Acceptances Held in Portfolios	.4	.7	2.9	23.4
Acceptances of Other Banks	----	.4	8.9	12.2

* The data for years 1922-1929 were taken from a table on page 338, Volume III, of "The New York Money Market", by B. H. Beckhart, Data for 1933 were compiled from Annual Reports of the Comptroller of Currency for that year.

The demand for acceptances by investors of the Seventh District is not great when compared with demand in the New York District. Nevertheless, Seventh District demand has been increasing of late years, the holding of acceptances of other banks by the principal accepting banks in Chicago having increased 40% between 1929

and 1933. This practise is, of cource, reprehensible, since it is a meaningless "playing with blocks" for a bank to buy a bill guaranteed by itself. The growth of this practise, particularly in the larger Chicago accepting banks interferes with the development of an open market for acceptances in Chicago and should be discouraged in every way.

THE FEDERAL RESERVE BANK AND THE CHICAGO MONEY MARKET

A Federal Reserve Bank and a money market may have relationships in one or all of three ways: The Bank may influence the development or decline of a market by influencing concentration of funds; it may or may not provide adequate credit for a market; and its policies may influence the activity of a market in varying degrees.

The Chicago Bank and the Growth of the Money Market

Rather than increasing the importance of the Chicago money market, the operation of the Reserve System has tended to lessen its importance in relation to New York, the most important money market in the country. The relative decline of the Chicago money market in spite of an absolute increase in the concentration of funds in the market, is illustrated by a comparison of the increase in deposits of New York and Chicago banks. In 1910, net demand deposits of Chicago banks were approximately half those of New York Central Reserve City banks, but between 1910 and 1913, demand deposits in New York decreased 1% while those in Chicago increased 16%. However, after the Reserve System went into operation, between 1913 and 1929, New York demand deposits increased 220% and Chicago demand deposits only 150%.

A similar situation exists with respect to concentration of bankers' balances. As was the case with net demand deposits, bankers' balances in Chicago in 1910 were approximately half those in New York, and between 1910 and 1913, those in New York increased 15% while those in Chicago increased 20%. However, between 1913 and 1929 bankers' balances in New York increased 69% while those in Chicago increased only 40%.

Another indication of the decline in importance of the Chicago money market appears in the proportions of total United States bank deposits held in New York and in Chicago at various times. In 1913 New York Central Reserve City banks possessed 9% of total United States deposits and Chicago banks 3%; in 1929, New York banks held 23% and Chicago banks 4%, indicating the relative decline in importance of the Chicago market as compared with the New York market.

The increasing predominance of funds concentrated in the New York market is also illustrated by the growth of proprietorship funds. Between 1910 and 1913 proprietorship funds of Chicago banks increased 26% and those of New York Central Reserve City banks 4%, whereas between 1920 and 1929, Chicago banks showed an increase of 160% as compared to New York's increase of 190%. Between 1929 and 1933, the decline in Chicago was 50% and in New York, 30%.

This further concentration of funds in New York since the operation of the Reserve System and in spite of the existence of the Federal Reserve Bank of Chicago has resulted in part, perhaps from the centering of System open market operations in the New York Reserve Bank[23] and the consequent enhancing of the New York market's importance through operations for System account.

Further evidence that the Federal Reserve Bank of Chicago has had little beneficial influence on the growth of the Chicago money market is the experience of the Chicago Stock Exchange in attempts to establish a money post and a call loan market similar to those of New York. The two attempts to establish this desk in the Exchange have failed, the first before it went into operation and the second after a few years of operation. The reason for these failures was lack of an adequate market for securities and for call money; that is, the Chicago Exchange could not compete with the New York Exchange. It is to be noted that since 1917 the operations of the Chicago Exchange have grown, whereas, prior to that year the Exchange appeared to be in a state of stagnation. It is believed, however, that this may be attributed to the energy and ability of men backing the Exchange rather than to any influence of the Reserve Bank.

The Chicago Capital Market has also increased in activity, but no connection between this and the existence of the Chicago Reserve Bank is evident.

On the whole, then, it may be concluded that the Federal Reserve Bank of Chicago itself has had no direct influence on the growth of the Chicago money market but that the operation of the Reserve System as a whole, although providing increased deposits and hence causing an absolute growth in the Chicago money market, brought about a decline in the Chicago market's relative importance in comparison with the New York money market.

Adequacy of Reserve Credit

It is difficult to ascertain whether the credit provided by the Reserve Banks has always been adequate to meet the needs of their districts for there is no data showing the demand for credit.

---

23 Clark, L. E., *"Central Banking and the Federal Reserve System"*, Page 169.

However, two criteria exist which indicate to some extend the manner in which a Reserve Bank has met the needs of a money market: one is the bills held under resale agreement, which indicates the support given to one section of the short term money market; the other is the proportion of their basic line borrowed by banks of the money market.

Before examining the adequacy of the credit provided, the Chicago money market, it is pertinent to determine the amount of credit which has entered the market. Figure 6 indicates the amount of credit in the Chicago money market and the movement of credit iuto and out of the market.[24]

One of the first outstanding characteristics of a comparison of these two charts[24] is the similarity of movement in the series of both charts although the amount of credit supplied the Chicago market was relatively larger than that which went into the New York market. Each series appears to be divided into five cycles: 1919 to 1922; 1922 to 1924; 1924 to 1927; 1927 to 1929; and 1929 to 1933. The cyclical movements of the New York Reserve Bank credit are more pronounced than those of Chicago, however.

The dissimilarity of the two series of data lines in the trend consists in the fact that in the Chicago series, after completion of liquidation in 1921 to 1927, the cycles show no particular upward trend or downward trend whereas movement of reserve credit into the New York market is upward from 1922 to 1924 and downward from 1925 to the fall of 1927. From 1927 to 1930 the series are similar again. The differences in these movements may be accounted for in one respect by changes in importation and exportation of gold, since 1922 and 1924 was a period of gold importation and 1925 to 1927 a period of exportation. The New York Bank was quite sensitive to these movements, while the Chicago Bank, farther in the interior and operating under a definite policy to build up its gold reserve, was thereby less affected.

This supply of credit provided the Chicago money market appears to have been adequate to meet the needs of the market. In the first place, the Chicago Bank, unlike the New York Bank, quoted no rate on acceptances, but was ready at all times to buy bills from bill brokers on resale agreement or at the purchasing price of the broker, but not less than the Bank's buying rate on bills. The buying rates therefore fluctuated automatically with the dealers buying rates and were sufficient to protect the Bank against loss.

---

24 The data for this chart were computed according to the formula suggested in Beckhart's *"Teh New York Money Market"*, Vol. II, p. 348. Data was taken from the Daily Statement of Condition in the Library of the Federal Reserve Bank of Chicago and corrected for Federal Reserve Notes in circulation in the District; correction was also made for notes circulating outside the District by use of data taken from the books of the Gold Settlement Fund, Washington, D.C.

The length of life of these resale agreements in the Chicago market was 9 or 10 days, while in the New York market it ranged from 7 to 11 days.[25] By buying these bills under resale agreement. a section of the Chicago money market was aided by reserve credit when necessary. Since the Chicago Bank always stood ready to purchase these bills, the aid of the Reserve Bank in this particular has always been sufficient. Except for June 1929 and June 1930, the amount of bills brought by the Chicago Bank under resale agreement did not compose a large percent of bills held, and the situation was similar in New York although there the proportion held was larger.

Another and better criterion of the adequacy of credit provided the money market by the Chicago Reserve Bank is the proportion of basic line borrowed by Chicago banks. Here, again, the credit provided appears to have been ample. After 1920, only on two occasions, have Chicago banks found it necessary to borrow beyond their basic lines, namely May and September, 1920. After 1921, Chicago banks never borrowed more than one-third their basic line.

Table 82.

PERCENT: BILLS HELD UNDER RESALE AGREEMENT OF TOTAL BILLS, FEDERAL RESERVE BANK OF CHICAGO*

	Chicago	All Reserve Banks
1922		
January	23	----
June	2	----
December	12	----
1923		
June	4	18
Deccember	5	19
1924		
June	None	5
December	2	12
1925		
June	2	10
December	4	10
1926		
June	9	22
December	11	19

25 Beckhart, B.H., *"The New York Money Market"*, Vol. III, p. 395.

1927		
June	9	6
December	11	18
1929		
June	40	17
December	16	40
1930		
June	30	8
December	5	9

* Compiled from data published in the Federal Reserve Bulletin 1922 to 1930 and Hearings of the United States Senate on *'Operation of the Banking System"*, S. 71.

Table 83.

PERCENT OF BASIC LINE BORROWED BY CHICAGO BANKS*
(Last day of month)

	1920	1921	1922	1923	1924	1925	1926
January	**	68.3	7.2	3.6	2.7	1.1	3.8
February	**	66.6	3.0	10.5	.6	1.0	4.0
March	**	82.7	8.6	18.0	7.1	5.4	12.0
April	**	61.6	1.6	14.3	2.1	1.2	2.3
May	108.1	51.0	3.4	7.2	1.5	6.8	2.3
June	99.0	56.1	2.6	15.7	.8	3.6	9.0
July	95.1	43.9	1.0	6.7	.2	.7	3.4
August	90.5	24.1	**	12.8	.2	3.7	5.1
September	100.0	26.6	**	14.0	.1	4.6	5.8
October	95.9	19.1	**	18.1	.1	6.0	11.2
November	91.0	14.9	**	13.2	.3	9.8	7.9
December	96.9	19.1	**	11.1	.5	8.8	14.5
	1927	**1928**	**1929**	**1930**	**1931**	**1932**	**1933**
January	2.3	4.5	17.8	.9	.4	1.4	***
February	8.7	5.5	33.2	.2	.4	1.2	***
March	5.0	14.5	27.1	.2	.1	1.3	***
April	8.9	15.0	25.4	.1	.6	.5	***
May	3.1	17.8	25.5	.1	.5	.5	***
June	4.8	23.2	20.6	.2	.5	4.5	***
July	1.8	24.1	11.3	.4	.6	1.9	***
August	1.1	22.5	19.3	.4	.4	2.2	***
September	2.1	12.9	9.9	.4	.5	1.7	***
October	3.6	20.1	1.2	.2	.9	.08	***
November	3.2	20.7	13.4	.3	1.0	.07	***
December	4.2	25.5	15.6	.1	3.0	.05	***

* Compiled from uncatalogued data in the Library of the Federal Reserve Bank of Chicago.
** Data not available.
*** No Chicago banks borrowed from the Federal Reserve Bank during 1933.

Since in the Chicago money market the most important institutions and the ones which provide most of the funds for the market are commercial banks, the fact that reserve credit available to them has in most cases been more than was used, indicates that credit provided by the Chicago Reserve Bank to the Chicago money market has been adequate to meet all needs.

Influence of the Chicago Reserve Bank in the Money Market[26]

Reserve Banks can influence activity in the money markets of the country in three ways: by use of the discount rate, by open market operations and by the personal influence of the officers. In the Chicago money market, however, the effectiveness of these measures of influence depends upon the policy of the New York Bank. When the New York rate is relatively higher than the Chicago rate, funds have a tendency to move from Chicago to New York; the Chicago rate is therefore effective in the Chicago money market only when it is not profitable to borrow in Chicago and lend in New York.

Although the actual movement of funds from Chicago to New York cannot be ascertained by available data, the correlation of changes in the discount rate in Chicago and New York and the borrowing of banks in the City of Chicago, provide a significant clue to this movement. In May 1923, the New York Bank reduced its rate from 4½% to 4% and by the end of May, rediscounting of Chicago banks with the Reserve Bank had declined $10,000,000; in June the Chicago rate was also reduced from 4½% to 4% with the result that by the end of that month Chicago banks borrowing had increased $18,000,000. In February 1925, when the New York rate was reduced to 3½% while the Chicago rate remained the same, the borrowing of Chicago banks declined $100,000 against a usual seasonal trend upward. Again in August, 1926, the New York rate was raised from 3½% to 4%, the Chicago rate remaining the same, and by the end of the month, Chicago member bank borrowing had increased $3,000,000 and by October 31 had increased over $20,000,000.

As further examples of the relative effectiveness of the New York and Chicago rates on the borrowing of Chicago banks, situations existing in 1927, 1928 and 1929 may be cited. In July and August 1927, the New York Bank was influential in having the rates of interior Reserve Banks reduced and finally reduced its own rate in the latter month. However, while the Chicago Bank refused to fall in line with the general reduction and maintained its

---

26 The conclusions in this section are drawn from data in the Library of the Federal Reserve Bank of Chicago and from data published in the Federal Reserve Bulletin and the Annual Report of the Federal Reserve Board.

rate .5% higher than the New York rate until September 7 when the Board forced a reduction, borrowing of Chicago banks declined \$3,000,000; and when the Board's forced reduction placed Chicago's rate on a par with New York5s, borrowing of Chicago banks increased \$3,000,000 by the end of September and \$4,000,000 more by the end of the year.

Following the rate reduction episode, the Chicago Bank succeeded in having its rate increased to 4% in January 1928, whereas the New York rate was not increased until February. During the period of discrepancy in rates, borrowing of Chicago banks increased only \$1,000,000 whereas since the rate reduction in September, Chicago banks' borrowing had tended to increase at the rate of \$3,000,000 a month. However, when the New York rate was increased in February 1928, borrowing by Chicago banks increased from \$17,000,000 to \$46,000,000 during that one month. In April, 1928, when the Chicago rate was increased again to 4½%, leading New York by approximately one month, the increase in borrowing by Chicago banks was only \$2,000,000, but when the New York rate also was raised to \$4½% Chicago member bank borrowing increased from \$48,000,000 to \$57,000,000 by the end of May. In July, 1928, both Chicago and New York raised rates to 5% and Chicago borrowing dropped \$7,000,000. In August, 1929, when the New York rate went to 6%, the borrowing of Chicago banks increased despite the personal pressure exerted by Reserve Bank officials.

On the whole, then, the correlation between borrowing by Chicago banks and the relatively higher discount rates and therefore interest rates in New York than in Chicago, indicates that funds move from Chicago to New York when a profit can be made by lending funds borrowed from the Chicago Reserve Bank. In order to prevent such a concentration of funds in New York, the Chicago rate should rule above the New York rate; in case of rate increase, the Chicago rate should be increased first; and in case of decreases, the New York rate should be decreased first.

Experience has shown, however, that if changes in discount rates, particularly when the movement is upward, are accompanied by appropriate changes in government bond holdings, the differential between Chicago and New York rates need not be great. In April, 1922, a reduction in the Chicago rate from 5% to 4½% accompanied by purchases of acceptances by the Chicago Bank and increased holdings of government bonds by the System, caused a reduction in borrowing of Chicago banks of approximately \$10,000,000 by increasing reserve deposits \$10,000,000. At this time the New York rate remained at 5% until June. The reduction at Chicago, together

with increased open market holdings, did not decrease borrowed funds lent in the New York market, but rather prevented further movement. In June, when the New York rate was also reduced to 4½%, borrowing of Chicago banks fell $28,000,000 below that of April. The ample supply of funds available to the money market affected by open market operations had equalized the rates of interest in the two markets, rates on 90 day commercial paper falling in both centers to 5%. A change of rate in this case when the reduction was first made by Chicago and was accompanied by appropriate open market operations, eliminated, to some extent, the effect of a differential in rate in the two centers.

A somewhat similar situation existed in 1926. In January, the New York rate was raised from 3½% to 4%, the Chicago rate having been 4% since 1923. This change in rates was accompanied by a reduction of government bond holdings by the Chicago Bank which caused reserve deposits to fall and therefore made for a reduction of member bank loans and an increase of interest rates to near the New York level, so near that it was still not profitable to borrow funds to lend in New York and borrowing by Chicago did not change greatly.

It would appear, then, that the principle concerning the relationship of discount rates in Chicago and New York in order to avoid the movement of funds from the former to the latter money market, might be modified somewhat by open market operations; however, evidence is insufficient to show the extent to which this modification would be possible.

Summary

It may be concluded that the Federal Reserve Bank of Chicago has not increased the importance of the Chicago money market in comparison with that of New York, but that the operation of the System has actually enhanced the importance of the New York market to the detriment of the Chicago market. This conclusion is based on the fact that before the establishment of the System, between 1910 and 1913, greater concentration of individual and bankers' deposits in Chicago than in New York gave evidence of the growing importance at that time of the Chicago money market.

Not only has the Chicago money market remained the lesser in importance, but the influence of Chicago Reserve Bank policy in the Chicago market has been less than the influence of the New York Bank's policy. By maintaining a differential in the discount rates the New York Bank appears able to attract or repel funds from the Chicago money market at its will, although System open market operations supported by the Chicago Bank may modify

this influence to some extent. The strengthening of the Reserve Board under the Banking Act of 1935 may have the effect of protecting the position of the Chicago Reserve Bank and the Chicago money market in this particular, but otherwise the Chicago market is at the mercy of the New York Reserve Bank.

Although the Federal Reserve System and the Federal Reserve Bank of Chicago have not succeeded in enhancing the relative importance of the Chicago money market, the market has at least been provided with adequate credit and has had every legitimate need satisfied by the Chicago Reserve Bank. In fact, the Chicago Bank has maintained a somewhat more stable supply of credit in the Chicago market and available to the Chicago market than the New York Bank has provided its market not only because of its position in the interior, but also because of the policy of its management.

CHAPTER IX

CENTRAL BANKING PHILOSOPHY IN THE MIDDLE WEST—1913 AND 1933

The present day attitude of Middle Western bankers does not reflect the bitterness toward the Federal Reserve System which developed during the campaign for banking reform in 1912 and 1913. In those years, the proposed reserve system presented in the Glass Bill was strongly opposed by the New York bankers, who favored instead, the Aldrich plan. Their principal strategem of opposition was that of persuading Chicago financial leaders to the same viewpoint and delegating them to lead the fight against the Glass Bill. This delegation of leadership to Chicago was considered prudent in the interest of the Aldrich plan, for it was feared that the unpopularity of Wall Street would prejudice the western part of the country against any plan sanitioned by New York banking interests. The opposition was led by the Chilago-dominated Currency Commission of the American Bankers' Association, which attempted to enlist aid from the various state associations as well as from influential bankers. The campaign against the proposed reserve system was carried on through speeches, educational programs and political intrigue.

OBJECTIONS TO THE FEDERAL RESERVE SYSTEM

The objectionable provisions of the Glass Bill, in the opinion of financial leaders in the Middle West, may be grouped under three heads: those in which it was believed it would cause a loss of constitutional rights; those which it was believed would cause a loss of profits, and those which it was believed would make for political control of banking.

1. Loss of Constitutional Rights.

The most generally expressed objection to the bill concerned the provision requiring membership of all national banks without allowing them representation on the central board—an objection which could be conveniently epitomized in the famous phrase, "no taxation without representation." Mr. George W. Reynolds in addresses before the Indiana Bankers' Association and the Illinois Bankers' Association, expressed this opinion in the followng manner:

> "The fact that they propose to organize these banks and to force us to subscribe to stock and have us furnish reserve money and to say at the same time that we are not worthy to be represented on the board of control, is at once unfair and unjust, and creates in the breast of every self-respecting man a spirit of protest. On the same prin-

ciple the Government could force any other business to subscribe capital in any other Government organization."[1]

Mr. Reynolds expounded his view so convincingly that both state organizations sent representatives to Washington to state these views and to endeavor to persuade Congress to modify the proposed bill. The Illinois Association added several Middle Western industrial leaders to its delegation of bankers.[2]

In testifying before the Senate Committee these bankers and industrialists argued for a scheme such as that provided by the Aldrich plan, in which the banks would be allowed to join the currency association at will. They contended that it would be Socialism to force the banks to obey the compulsory features of the proposed bill.[3]

Today it is apparent that it was wise, if not necessary, to include a provision for compulsory membership of national banks in the Reserve System. With bank opposition so general, in all probability a voluntary membership would have rendered the whole plan ineffective; in fact, the chairman of the Currency Commission of the American Bankers' Association admitted his belief that this would be true in his testimony before the Senate Committee.[4]

2. Loss of Profits.

It is generally understood that the purpose of reform is to improve existing conditions and that improvement cannot result without change. The leading Middle Western bankers who opposed the Glass Bill readily admitted the evils of their system of central reserves, as well as the disadvantages of exchange charges, and yet, for fear of jeopardizing their own interests, they were unwilling to approve a change which would remedy the situation. Apparently they desired the impossible, reform without change.

The spokesman of the Chicago banking community felt that the provisions of the Glass Bill, providing for concentration of reserve in reserve banks and giving access to these reserves to the smaller banks, would remove the need for the correspondent system, which was an important source of revenue for both city and country banks. Such a fear beset Mr. George M. Reynolds of the Continental National Bank during the early stages of the drafting of the bill. In setting forth the principles which he thought should be embodied in the bill, he stated that he had no objection to changing the reserve requirements, but he thought the reserves should not be taken out of the existing channels of trade. According to Mr. Reynolds' opinion at least one-third of the required reserve should be carried

1 Illinois Bankers Association, *Annual Report* 1913, p. 147.
2 U. S. Senate Banking and Currency Committee, Hearings, HR 7834, pp. 1533, and 2204.
3 Idem., pp. 1533, 2192 and 2204.
4 Idem., p. 39.

with the correspondent banks. Similar opinions were voiced by leading Chicago business men.[5]

In addition to fearing a loss of business through interference with correspondent relationships, Mr. E. D. Hulbert of Chicago feared that the metropolitan banks would suffer from competition in the commercial paper market. According to Hulbert's opinion, the fact that the reserve banks would be in the market for commercial paper would increase the purchase price to the Chicago banks and thus reduce their earnings in this field.[6]

In order to obtain the support of the country banks in their contentions the city banks engaged in a policy of "log-rolling," by which city banks opposed the check collection system in return for the aid of country banks in opposing other provisions of the Glass Bill. At this time a large part of the income of small country banks arose from exchange charges.[7] Although the practice of making deductions from the face of the check when it was presented across the counter for cash was not so prevalent in the Middle West as in other sections of the country, this did not prevent Mr. J. S. Aisthorpe, Vice President of the Illinois Bankers' Association, from voicing to the Senate Committee a complaint against any new arrangement.[8]

A third objection of this general type concerned the proposed retirement of national bank notes and refunding of the 2% bonds held by banks as security for these notes. The proposal was at the end of twenty years to retire the 2% bonds with the circulation privilege and issue in their place 3% bonds without the circulation privilege. Banks holding these bonds were to be permitted to convert one-twentieth of their holdings each year until all had been retired. In order to replace the national bank notes removed from circulation, the Federal Reserve Banks were to be allowed to issue bank notes on the basis of the bonds converted by the national banks.[9]. By this process it was hoped to provide the United States with a more unified currency.[10]

The Chicago bankers contended that the proposed action was a breach of faith on the part of the Government, for the banks had been promised that if they supported passage of the Gold Standard Act in 1900 and aided the Government in reducing the carrying charges on the public debt, national banks would be given the privilege of note issue for thirty years. Now the Government not only wished to abrogate its agreement regarding the note issue,

5 House of Representatives U. S. Hearings on HR 7837, Part 6, p. 357; and Illinois Bankers Association Annual Report 1913, p. 149.
6 Senate, U. S. op.cit., p. 140.
7 Kilbourne, D. K., Money & Banking, p. 118.
8 U. S. Senate, op.cit., p. 2192.
9 Willis, H. P. "*The Federal Reserve System*". p. 336.
10 Illinois Bankers Association, op.cit., p. 151.

but threatened the banks with an actual loss, since it was believed that new 3% bonds would lack marketability and would sell below par, whereas the 2% bonds had been purchased at par or above.[11]

This proposed elimination of the 2% bonds was not carried and it is impossible to say definitely what its results would have been. The other controversial provisions, however, were put into practice and it is impossible to see from experience that the arguments in regard to loss of bank profits were unsound.

Mr. J. D. Phillips, in an address before the Illinois Bankers' Association, had stated that in his opinion, Illinois banks would lose approximately $5,000,000 a year in income of the reserve provisions were adopted.[12] In actuality, however, since many of the smaller banks did not join the system, profitable correspondent relationships and at the same time obtained the advantages of the Reserve System through their relations with large banks. But even in theory, if all banks had become members, the predicted loss of income was not logical because the release of reserves would have allowed banks to expand their loans to such a point that revenues would have more than counterbalanced the loss of income from the correspondent system.

Neither in the country as a whole nor in New York City did bankers balances decrease after the institution of the Reeves System. On the contrary, there was an actual increase in bankers' balances of national banks in the country after 1914 and by 1915 balances were larger than at time since 1911. The same trend was followed by correspondent balances in New York City banks. Chicago banks, however, showed a somewhat different trend: in 1912 their balances had been $262,155,507 and by 1915 the amount had fallen to $239,132,095. However, it is doubtful if the decrease can be attributed to the organization of the Reserve System for the reason that the trend of decline had set in before the Glass Bill had been given form; during 1912 correspondent balances had declined $5,000,000 and during 1913, $6,000,000; during 1914 the reduction amounted to only $3,000,000.[13]

The objection that the Reserve Banks would ruin the commercial paper market also proved groundless. Instead of injuring the market, the Reserve Banks actually strengthened it with the result that dealers in commercial paper have become an integral factor in the operation of the Reserve System. The effect has been quite the opposite of that predicted.

Criticism of the par collection feature of the Glass Bill was without foundation also. As a matter of fact, the practice of

11 American Bankers Association, *Annual Report* 1913, p. 89.
12 Illinois Bankers Association, op.cit., p. 281.
13 Compiled from the Reports of the Comptroller of Currency 1911-1915.

making exchange charges was placing an immense burden on business and was impeding rapid settlement of transactions. With city banks competing for the business of county banks, the latter were allowed to make excessive deductions from the face of checks which were borne by the city bank in some cases and in others, were passed on to the holder of the checks. In the case of small city banks, the business man was required to shoulder the loss.[14] In order to avoid these charges, checks were often sent many hundreds of unnecessary miles in order that they would pass through banks which were parties to reciprocal agreements concerning the clearing of checks. As a result, settlement of transactions were made at a slower rate and an unnecessary amount of a bank's available funds were tied up in "float".[15]

The last objection of this group concerning the retirement of the 2% bonds, was not without sound foundations of perhaps both an ethical and an economic nature. The charge of bad faith on the part of the Government is the sort of question concerning which strong arguments could be advanced on both sides; this aspect of the matter is beyond the scope of this study. On the economic side, it is difficult to evaluate the fear of the banks that there would be no market for 3% Government bonds. Dr. H. Parker Willis believed that the demand could easily absorb any additional bonds of this type which would be put on the market by the banks because the amount issued each year would be but a small part of the amount annually purchased.[16] It is also necessary to consider in this connection that the Government planned to apply its share of the profits of the Reserve System to the retirement of these bonds. Although no definite conclusion can be drawn, it seems probable that under these conditions, national banks would not have lost by the proposed conversion.

3. Government Interference.

The third group of criticism offered by the middle western bankers centered about the Government control provisions of the Glass Bill. One of the better points of contention was the method of note issue. Several critics contended that since the new notes were to be issued by the Federal Reserve Banks, the Government should not be responsible for their payment in case for some reason the Reserve Banks were unable to meet their obligations. The Chicago bankers stated this view repeatedly before the Senate Banking Committee, as well as before other groups. They pointed out that unless Federal Reserve Notes should serve only the purpose of checks, namely that of facilitating trade, and not be

---

14 U. S. Senate op.cit., p. 2192.
15 Burgess, W. R., *"Reserve Banks and the Money Market"*, p. 71.
16 Willis, H. P., op.cit., p. 337.

designated as legal tender, the Government would be creating a liability without having a corresponding asset. In support of this contention, various European central banks were cited as examples where in most cases the banks were liable for their own note issues.[17]

In defense of the framers of the Glass Bill, it must be said that they did not consider the note issue plan as a vital provision of the bill; it was adopted by them principally as a matter of expediency to secure the support of the Bryan faction of the Democratic Party. Bryan and his followers, believing in complete Government control of currency and coin, made as their least demand in return for support of the bill, that the Government guarantee the redemption of notes to be issued by the Reserve Banks. President Wilson favored making this concession since, as he stated it, the Bryanites would really be given only the shadow of their wish that the Government be the sole note issuing agency, whereas those who favored the original provisions of the Glass Bill would retain the substance. In other words, even though the Government was technically liable for redemption, in all probability it would never be called upon to fulfill this liability since the notes were to be a first lien on the assets of the Banks, and in the meantime, the Reserve Banks, not the Government, would be the issuing agency.[18]

A second objection advanced against the method of currency issue dealt with the control of the Federal Reserve Board over such issues. The critics believed that the desired automatic functioning of the proposed note issue would be prevented by the interference of a body such as the Board, which was subject to political influences.[19]

Another objection cited the political interference which would result from the fact that Government appointees were to be on both the central board and on the boards of directors of the regional banks. It would be much better, ran the argument, to have bankers in control of the system instead of political appointees who, in all probability, would know nothing of banking and finance.[20] It was also pointed out that the three United States Cabinet members who were to be on the board, would not have time to give adequate attention to the business of the board, with the result that many unnecessary difficult problems might be allowed to develop.[21]

Criticism of the proposed Government guarantee of Federal

---

17 Indiana Bankers Association, op.cit., p. 76.
U. S. Senate, op.cit., p. 283.
Illinois Bankers Association, op.cit., p. 100.
18 Glass, Carter, "*Adventure in Constructive Finance*", p. 124.
19 Illinois Bankers Association, op.cit., p. 100.
20 U. S. Senate, op.cit., p. 46.
21 Idem.

Reserve Notes was with little doubt justified. In the first place, as Mr. Reynolds had pointed out to the Indiana Bankers' Association, the Government would be creating a liability without having a corresponding asset; secondly, such a guarantee was really superfluous since the notes were to be fully covered by gold and commercial paper and in case of a decline in value of the latter, the notes would still have a first lien on other assets of the bank; and finally, the guarantee would establish dangerous principle of future Government responsibility for all note issues.

The fear of political influence through the Reserve Board on note issue policies was not so well founded. The tendency of politics is, of course, towards inflation, but since the Reserve Board was to have only an approval power, not an initiating power, in regard to note issue, it would not be in position to respond to political pressure towards inflation. Moreover, further checks on inflation were provided in a required 40% gold reserve against all Federal Reserve notes and in a 10% tax on other Reserve Banks' notes being paid out by a bank other than the bank of issue. These provisions left little opportunity for political influence to be exercised over note issue. This situation is indicated by the fact that when the Roosevelt Administration attempted to inflate the currency in 1933, no moves were made to inflate Federal Reserve note currency but rather provisions were made for issues of other types of notes on a liberalized basis.[22]

In other aspects of the System than that of note issue, however, the fear of undue political influence has proved by experience to be well founded. The thwarting of such influence was attempted in 1933 by the framers of the Banking Act of that year when they were unsuccessful in removing the Secretary of the Treasury from the Federal Reserve Board. This proposed reform was dropped when it became evident that the Secretary wished to remain a member of the Board in order that he might influence its policies. At first thought it might appear that the fear of political influence by Government directors on the boards of the regional banks was not warranted since these directors were outnumbered two to one by bank-elected directors. However, the presence of even a minority of Government directors, in view of such possible developments as Governor Eccles' proposal to make the Federal Reserve Agents principal officers of the regional banks, gives an indication of the potential political organization of the boards. The prophecy that the Cabinet officers would not be able to give adequate attention to the matters coming before the Reserve Board has proved to be true. For example, when Mr. Mellon was Secretary of the Treasury,

---

22 Federal Reserve Board, *Annual Report* 1933, p. 13.

he gave his major attention to other important matters and attended board meetings only when requested to do so.[23] Under such circumstances, there would be a tendency that the other members of the board care for the numerous and important details arising and that the Secretary of the Treasury utilize his position to influence policy whenever he though it politically expedient.

REACTIONS FAVORABLE TO THE PROPOSED FEDERAL RESERVE SYSTEM

Proponents of the Glass Bill were few in the Middle West for those bankers who did not actively oppose the System refrained from supporting it. But in spite of the strong opposition, some comments in favor of the System were made.

Although Mr. George M. Reynolds was violently opposed to many features of the bill, he was fair-minded enough to point out at least a few advantages to be derived from a system such as the one proposed. He stated in an address before the Illinois Bankers' Association: "While we are criticizing many features of the Bill, I want to say that I think much of it has merit and we ought to consider it in all of its phases with a view to correcting the improper features of the bill that legislation may be enacted."[24] He went on to say that a reserve system would provide a means whereby credit could be changed from one form to another and thus protect the country's gold reserve.[25] In other words, Mr. Reynolds at least approved the feature of the bill which provided elasticity of credit.

Four other approved aspects of the bill were presented by Mr. A. F. Dawson in an address before the Illinois Bankers' Association in 1913. The first called the attention of the bankers to the fact that the currency of the country was to be tied to the commercial activity; that is, commercial paper was to be used as a basis for currency issue and in this way, the amount of currency in circulation would be kept in line with the business needs of the country.[26] A second point receiving favorable comment was the fact that the currency funds of the United States would be kept in proper channels and not locked in the vaults of the Treasury or of banks.[27] Prior to the passage of the act the habit of banks was to keep their reserve stored in their vaults and by such methods the country could not receive the full benefit of the currency it had in circulation. Mr. Dawson believed also that the provision for retirement of the national bank notes—the plan discussed above—

23 In an interview, Mr. Edmund Platt, former Vice-Governor of the Federal Reserve Board, stated that Mr.N Mellon attended meetings of the Board only when requested.

24 Illinois Bankers Association, *Annual Report* 1913, p. 145.

25 Ibid., p. 146.

26 Indiana Bankers Association, *Annual Report,* p. 60.

27 Illinois Bankers Association, op.cit., p. 98.

would be effective and fair,[28] but unfortunately for the cause of a unified currency system in the United States, the notes were allowed to remain in existence. Mr. Dawson's fourth favorable comment was that the bill would permit the establishment of American banks abroad and the acceptance of drafts. Under the old banking law, banks were not permitted to engage in either activity,[29] but the proposed bill removed these restrictions and provided that American banks could establish foreign banks and accept drafts.[30] The wisdom of this provision has been shown by the rapid development of New York as a money center since the passage of the Federal Reserve Act.[31]

There is no doubt that these advantages of the proposed legislation were obvious: there was a great need to increase the elasticity of both note issues and credit, to free large amounts of reserves and to eliminate the handicaps of American banks in financing foreign trade. However, in the minds of the Middle Western bankers, these provisions for the good of the entire country were evidently outweighted by their aversion to Government interference and their fears of losing profits and constitutional rights.

THE ATTACK ON THE GLASS BILL

The feeling of Middle Western bankers against the proposed Reserve System evidenced itself in the severity of the attack on the Glass Bill. When it became apparent that the new administration was going to institute banking reform, a meeting of the currency commission of the American Bankers' Association was called in Atlantic City on June 18, 1913. Here the commission worked on a questionnaire which had been issued to it by the Senate Banking Committee. Thereafter, a conference with Senator Owen was called in New York City where amendments to the pending bill were submitted in writing. When it was found that the Democrats had finally agreed on a bill, it was thought advisable for the bankers to give some formal public expression to their views on the provisions of the proposed bill and enlighten the public concerning certain effects of the bill which the bankers believed had not been foreseen. To organize towards this end, a conference was called to meet in Chicago on August 22, 1933.[32] This conference of bankers was composed of representatives of all the large clearing houses, the bankers' associations of the different states, and the currency commission of the A. B. A. A body as large as this special confer-

[28] Illinois Bankers Association, op.cit., p. 99.
[29] Kilbourne, D. K., *"Money and Banking"*, p. 452.
[30] Federal Reserve Act, Sections 13 and 25.
[31] Dunbar, C. F., *"Theory and History of Banking"*, p. 127.
[32] American Bankers Association, *Annual Report*, 1913, p. 75.

ence was unwieldy and therefore a committee representing all three groups was appointed. The work of this committee was to formulate and express the sentiment of the bankers and to suggest to Congress specifications and amendments in harmony with the ideas of the A. B. A.[33] In the meetings of this committee, the draft of the proposed bill was used as a base, the parts objected to being marked out with red ink and the proposed substitutions printed on the opposite page.[34] The rearranged bill was then printed and sent to all banks in the United States.[35]

There seems to be little doubt that the report of this committee of the Chicago conference represented the opinion of the majority, although the minority apparently did not have a chance to express itself. According to the testimony of Mr. H. A. Moelenpah, the "skids were greased":[36] no opportunity had been given for anyone opposing the revisions to the bill to express an opinion; in fact, time had not been allowed for discussion of the bill on the floor of the committee sessions. Mr. Moelenpah stated that he had asked for that opportunity but had been told that the only way he could bring up any discussion was to bring in a minority report, which had been impossible because the time was too short.[37] Mr. B. F. Harris of Champaign, Illinois, tried to refute Mr. Moelenpah's testimony by calling attention to the fact that Mr. George M. Reynolds had gone to the extreme of trying to forestall opposition to the Reserve Act on the floor of the sessions.[38] In his testimony, Moelenpah had stated that many country bankers favored the Gliss Bill and were grieved that they had been misrepresented in the committee report.[39] Harris maintained that Moelenpah was unqualified to make such a statement since he had made no canvass of his own state or of any other state to ascertain the view of the bankers.[40] However, it is worthy of note that Harris offered no specific refutation of Moelenpah's statements, but merely attempted to discredit in general his testimony.

In the subsequent discussion of the acceptance of the currency commission's report by the Association itself, some opposition de-

33 Ibid., p. 76.
34 Copy of bill in New York Public Library.
35 A second committee was also appointed to proceed to Washington and take up the objections with proper authorities. This committee, composed of 7 members, was headed by Mr. J. B. Forgan of the First National Bank of Chicago. With Mr. G. M. Reynolds of the Continental National Bank also a member, Chicago was the only city having two representatives on this committee and no New York bankers were included in the membership. (American Bankers Association, op.cit., p. 77). This fact would seem to strengthen Dr. H. Parker Willis' view that the part played by Chicago bankers was that of a catspaw for the New York opposition.
36 Hearings, Senate Banking and Currency Committee, op.cit., p. 1540.
37 Ibid., p. 1540.
38 Ibid., p. 2214.
39 Ibid., p. 1542.
40 Ibid., p. 2215.

veloped. Attempts on the part of protesting bankers to express their opinions were hooted down by members opposing their views and an attempt was made to railroad the approval of the report through on the plea that it was necessary to take time for lunch. This move was defeated, however, and the discussion was continued. The chairmen of the convention, of which there were several, including Mr. George M. Reynolds, were all quite liberal in allowing discussion, as they could well afford to be: the temper of the convention is evident from the fact that not more than two dissenting votes were cast on any one of the resolutions dealing with the acceptance of the currency commission's report.[41]

The efforts of the American Bankers' Association to defeat or greatly modify the Federal Reserve bill called for a considerable increase in the expense of the currency commission. In the year 1912 the commission spent $450.95;[42] in 1913, when the opposition to the proposed system was at its height, it spent $2,567.54.[43] The appropriation in 1914 of $10,000[44] for the use of the currency commission is significant because it gives evidence that the American Bankers' Association was willing to go to considerable expense either to study the currency question and make suggestions, or to fight for the interests of the bankers against the Glass Bill. Since the action of the members of the commission shows that greatest emphasis was laid on fighting the measure, it may be concluded that the increased appropriation was intended for opposing the Federal Reserve Act as proposed rather than for study of the currency question.

After January, 1912, public opinion began to swing from the Aldrich plan over to the Glass Bill.[45] The fact that this trend was not changed by the opposition and attack of bankers was partly due, no doubt, to the contradiction and the inconsistency of their campaign. An example of inconsistency appears in the action of the National Citizens' League, an organization formed by New York City bankers in conjunction with Chicago business men for the purpose of spreading propaganda in favor of the Aldrich plan.[46] Chicago was chosen as a base for the campaign in the belief that too much suspicion of motives would result if it originated from New York City. In order that the movement would seem as spontaneous as possible the National Board of Trade was importuned to appoint a committee to create such an organization as was desired. Their committee met in April, 1911, and arranged that

41 American Bankers Association, op.cit., p. 111 et sequi.
42 Ibid., p. 88.
43 Ibid., p. 139.
44 American Bankers Association, *Annual Report*. 1914, p. 14.
45 Laughlin, J. L., "Federal Reserve Act: Its Origin and Problems", p. 69.
46 Idem.

the Chicago Association of Commerce should appoint the directors of the new organization.[47] After several conferences, the National Citizens' League for the Promotion of a Sound Banking System was founded June 6, 1911. The Chicago financiers were alone concerned in the launching of the league.[48]

Evidently for the time being, control was out of the hands of the New York group. The league was organized as a non-partisan body and in the early days of its activity it conducted a campaign intended to arouse public interest in the currency question and to inculcate sound principles of currency reform in the public mind; it made no definite proposal in the form of a bill. The league formed branches in forty-four states for this purpose, using newspapers, public speakers, and magazines for their propaganda, in addition to sending out pamphlets to an extensive mailing list. A monthly publication, "Banking Reform", was given wide circulation and a book of the same name was written and made available to all who evidenced any interest in the question.[49]

The change in attitude of the league after April 1, 1913, probably marked the return of the New York influence. Before this time, Professor Laughlin asserts, the league had been so thorough non-partisan that the hostility of the partisan New York group was aroused to the extent of decreasing financial contributions. The New York group must later have regained influence, however, because after April 1, 1913, the date on which Professor Laughlin was forced from the executive chairmanship of the league,[50] the president, Mr. John V. Farwell, went to New York to protest against certain provisions of the Glass Bill which had formerly been in line with the principles of the league.[51]

This inconsistency in attitude of the National Citizens' League has made its importance in the passage of the Reserve Act a matter of debate. Dr. Willis believes that the league had an influence hostile to the passage of the Glass Bill.[51] Professor Laughlin states, however, that the influence was hostile only after his own withdrawal on April 1, 1913.[52]. In agreement with this latter opinion Mr. A. D. Welton quotes Senator Cartel Glass as saying, "No league, no bill."[53]

---

47 Ibid., p. 60.

48 Wheeler, H. A., "The National Citizens League." *Annals of American Academy of Political Science,* Vol. XCIX, Jan. 1922, p. 28.

49 Welton, A. D., *"Educational Campaign for Banking Reform",* Ibid., p. 29 et sequi.

50 Laughlin, J. L., op.cit., p. 104.

51 Willis, H. P., op.cit., p. 273.

52 Laughlin, J. L., op.cit., p. 150.

53 Welton, A. D., op.cit., p. 36.

PRESENT DAY ATTITUDE TOWARD THE RESERVE SYSTEM[54]

Today in the Seventh District, the old feeling of antagonism toward the Reserve System has largely disappeared. Those banks which are not members remain outside the system because of lack of incentive to join rather than because of antagonism. Non-member banks in the Seventh District have failed to join the system for one or several of five different reasons: (1) advantages of membership could be obtained through correspondents; (2) no interest was paid on reserve deposits; (3) hostility because of attempts to force par-collection of checks; (4) administrative objections; and (5) burdensome restrictions on loan and discount policy of member banks.[55]

However, it was generally admitted by these non-member bankers that changed conditions in 1933 making it more advantageous to join the system, had nullified many of their arguments and that eventually membership might become desirable, although the removal of some conditions current before 1933 still did not make membership advantageous enough to offset the trouble and expense of joining the system.[56]

Among the bankers interviewed, only three remembered the bitterness of the par check collection controversy and had for that reason refrained from membership. Ten of the fifty did not know enough about the operation of the Reserve System to discuss it intelligently.

Among the fifty Seventh District bankers interviewed by the writer, the objection most often raised against membership in the system was that advantages of the system could be obtained without the expense of membership, through correspondent relationships with large member banks. The costs of membership, it was generally stated, result from two facts: first, that Reserve stock pays only 6% dividends whereas loans can be made for at least 7%; and second, that Reserve Banks pay no interest on reserve accounts whereas correspondent banks pay at least 2% on deposits.

The only privilege of membership which many of the bankers interviewed could see was that of rediscounting, but since it was pointed out that borrowing or rediscounting with a correspondent can be done under less rigid requirements than conducting these operations with the Reserve Bank, this privilege really offers no

54 The material for this section was largely obtained through interviews with fifty member and non-member banks in the Seventh District in the states of Illinois and Iowa.

55 For a more complete discussion of this subject, see Tippets, C. S., *"State Banks and the Reserve System"*.

55 The Banking Act of 1933 prohibited interest on demand deposits; also the public distrust of banks in general made it desirable that banks, especially small banks, have the prestige of membership. However, after the failure of many member banks, the Reserve System itself lost a good deal of its prestige, which partially nullified any advantage of membership.

advantage. One indirect advantage which most non-members could agree upon was the advertisng value of displaying the emblem of Federal Reserve membership.

On the whole, then the average non-member Seventh District banker is not now hostile to the Federal Reserve System, but is merely indifferent because membership offers no apparent immediate advantage. The only method which could be used to incorporate these non-member banks in the system would be compulsion or persuasion equivalent to compulsion such as that exerted by the Federal Deposit Insurance Corporation. The attitude of member banks does not differ greatly from that of non-member banks. Many bank officers interviewed took the system as a matter of course and showed little more knowledge of its operation than did non-member bankers. Of the twenty-five member banks interviewed, over half had not rediscounted with the Reserve Bank. However, there was no criticism of the System; the reaction toward the bank was favorable and the officers of the Reserve Bank of Chicago were particularly well liked. The personal popularity of these officers was especially apparent in Chicago financial circles. In only one state, Iowa, was there any undercurrent of dissatisfaction. There is was vaguely felt that "the Reserve System does us no good." This expression seemed to indicate a customary emotional attitude rather than an objection whose exact grounds could be determined. Probably this feeling dates back to the difficulties between Iowa banks and the Chicago Reserve Bank in 1920 and 1921. The fact that the present Governor of the Federal Reserve Bank of Chicago is from Iowa should go far to alleviate the latent hostility in that state.

In the early days of operation, the Chicago Bank maintained a force of three field men who endeavored to contact every bank in the district during the year. While these men were in the field, relations between member banks and the Reserve Bank were quite cordial. For example, during an influenza epidemic when entire executive staffs of several member banks were incapacitated, the Reserve Bank practically operated these banks until their employees returned.[57] Unfortunately, however, the field force has now been reduced to one man and both member and non-member banks have been allowed to lapse into a state of indifference regarding the Reserve System.

In summary, the objections to the Federal Reserve System and

57 Interview with Mr. Paul R. Winegardner, formerly Field Representative of the Federal Reserve Bank of Chicago.

* Letter from Federal Reserve Organization Committee Transmitting Briefs and Arguments Presented to the Organization Committee Relative to the Location of the Reserve Districts in the U.S. 63rd Congress, 2nd Session, Document No. 485, p. 339.

the whole campaign against the Glass Bill were marked by inconsistency and shortsightedness on the part of most of the bankers. The large banks did not always agree on what the effects of the bill would be, but they feared for their own interests and the protestations that they were protecting the public lost force when their real motives were analyzed. Although there were some attempts for fairness of criticism on the part of one or two leaders, they were unable to maintain this attitude and soon lapsed back to the attitude of selfish criticism. Largely because of the unfairness of many of the critics, and because of the unpopularity of the Aldrich plan, the bankers lost the support of public opinion. As a result, most of the efforts to defeat or modify the Glass Bill, originating in Chicago, were of no avail and the bankers saw the bill passed and signed by the President without the embodiment of the principles which they had propounded. Fortunately, in 1933, the hostility aroused during the campaign of attack in 1913 and 1914 has disappeared, although the prevailing attitude is still one of indifference rather than friendliness.

CHAPTER X.

CONCLUSION

The Federal Reserve System has completed twenty years (November, 1934) as an integral part of the banking structure of the United States. During these years of operation it has passed through periods of war, prosperity and commercial crisis. Although the results of the Reserve System's operation are customarily considered as the outcome of the operation of the System as a whole, in the final analysis the accomplishments of the System have been the result of the operation of twelve semi-autonomous regional banks, each of which performs many central banking functions, under the supervision of the Federal Reserve Board. Each regional bank finds within its district certain local situations and problems which should necessarily modify and govern its activities as a central bank; in the New York District foreign exchange and money market problems have combined to make that bank the most important bank of the System because of its direct contact with the rest of the world; in the southern and western districts banking problems center around agriculture, making Reserve Banks in these districts exceedingly sensitive to agricultural needs and desires; and in the middle-western districts the Cleveland and Chicago Banks meet difficult problems of credit analysis and proportioning of credit arising from an unusual combination of important agricultural and industrial areas.

Within the boundaries of the Seventh Federal Reserve District, the Chicago District, are included the rich agricultural areas of the upper Mississippi Valley in Iowa, Illinois and Indiana, the valuable dairying region of Wisconsin and the fruit-growing area of the lower peninsula of Michigan. The important manufacturing centers of the Chicago and Detroit areas are in the Seventh District as well as the secondary centers of Indianapolis, Indiana; Milwaukee, Wisconsin; Peoria, Illinois, and Grand Rapids, Michigan. Originally the Seventh District included only a small portion of Wisconsin, although many banks in other parts of Wisconsin and the upper peninsula of Michigan had petitioned to be placed in the Chicago District. The inevitable dissatisfaction stimulated by the Milwaukee banks finally forced the Federal Reserve Board, evidently by political pressure, to shift twenty-six counties in Wisconsin from the Minneapolis District to the Chicago District.

Although this addition of territory increased the District's resources, it did not materially enhance the Chicago Bank's importance, for it still remained second in size and importance to the

New York Bank. The City of Chicago, located as it is at the center of a railroad network reaching into all sections of the country and at the foot of a navigable lake giving eventual access to the Atlantic Ocean, as well as being the center of the richest agricultural and manufacturing areas of the country, provides a natural financial and trading center as a seat of a regional Reserve Bank with rich contiguous territory served by numerous banks. It is not surprising, therefore, that a Regional Reserve Bank located in Chicago, with a district including important parts of the Mississippi Valley, should be the second bank of the System.

Although the Federal Reserve Bank of Chicago has been the second largest Reserve Bank throughout its history, it has not had the support of all the banking resources contained in the district; the majority of Seventh District state banks have never been Federal Reserve members even though at times the Seventh District membership has been the largest in the country. Formerly the bank maintained a field force of four representatives who made at least one call per year on every member and non-member bank in the District. It was admittedly a difficult problem to persuade non-member bankers of the advantages to be derived from Federal Reserve membership since in many cases their ability and background was inadequate to an understanding of the System's operation and in other cases the desire for immediate profits was a deterring force.

Nevertheless the fact remains that the Federal Reserve Bank of Chicago was generally held in high esteem by the majority of non-member bankers and the Reserve Bank's representatives were always welcome. In the business of selling, one of the first goals in the making of a difficult sale is acquiring respect for the institution and its representatives. It is unfortunate that the Chicago Bank did not follow up this initial advantage by increasing the vigor of its efforts to obtain new members rather than reducing its field force by 75% and apparently giving up the attempt to increase membership among non-member banks. This cessation of contact with non-member banks came just prior to a time when these banks needed the advice and support of the System more than ever before; the field force was reduced in 1928. If the Chicago Bank had vigorously encouraged non-members to join the System instead of evidently resigning them to their fate, many Seventh District bank failures might have been avoided, although all, of course, could not have been saved. The Federal Reserve Bank of Chicago, then, failed in its duty to educate and encourage non-member banks to join the System, curtailing its bank relations activity at a time when such contact was most sorely needed, although the Reserve Bank could well have afforded to carry on this work.

Since the Chicago Bank was unable to enlist the active support of the majority of banks in its district, its attempts to standardize banking practise and direct the course of banking development necessarily could not be successful. Even among member banks the chief weapon of standardization, bank examination, was not successful, the cost of management of national banks being larger per dollar of profits than that of state member banks, while the earnings of state bank members were larger, comparatively, because of their investment in higher paying, although less safe, securities.

The only banking function which the Chicago Bank was unable to standardize in the Seventh District was the clearance and collection of checks. In this field the Chicago Reserve Bank was successful in obtaining practically unanimous support of both member and non-member banks without creating the enmity or ill-feeling which was aroused in other districts. By bringing all banks in the District into the check collection system, par check collection was instituted and the practice of making exchange charges practically eliminated. In bringing this about, the Chicago Bank tactfully overcame opposition and thereby avoided much of the ill-feeling that was engendered in other districts by attempts to use coercive measures. The management of the Chicago Bank is to be commended on their solution of this difficult problem.

Although attempts at standardization were not generally successful, the fact that the Chicago Bank did succeed in raising the banking standards of its members is evident from the fewer failures among members than among non-members. This favorable conclusion is modified, however, by the fact that the larger banks in the Seventh District composed in general the System membership and morality in the last few years was greater among banks of small capital, whether members or non-members. However, it is to be assumed from the facts, that the Chicago Reserve Bank has raised to some extent the banking standards of its members, although it appeared helpless to prevent the fatal drift of the investment policy in many banks toward investment in long-term securities rather than in self-liquidating short-term paper.

There was one respect, however, in which the standard of banking was not maintained at that level set by state banking departments: this was in the matter of granting trust powers to national banks. Not until 1933 did the capitalization of national banks exercising trust powers equal or surpass that of state banks with trust powers. Although theoretically the Board made the final decision in the matter of granting trust powers, it did so on the recommendation of the regional Reserve Bank. This meant that at times the Chicago Bank recommended banks with less than the average capital

of state banks with fiduciary powers. The merits of the Reserve Bank's recommendations cannot be judged since it may have been warranted in recommending certain smaller banks on the grounds of their condition or as a matter of expedience in persuading them to retain a federal charter rather than convert to a state bank. However, the fact remains that national banks exercising fiduciary powers were inferior to state banks in like position with respect to capitalization.

Although the Chicago Bank was not successful in persuading the majority of banks in the Seventh District to join the System, its membership was sufficient to bring about a situation which the opponents of the Federal Reserve System in 1913 had feared; the weakening of correspondent relationships. Chicago bankers opposed the Reserve System at its organization because they feared the reserve and borrowing provisions of the act would make correspondent banks unnecessary. Evidently the fears of these Chicago bankers are now beginning to be realized for bankers' deposits have been of decreasing importance in the Chicago money market since 1925, while reserve deposits with the Chicago Reserve Bank have remained stable throughout the period. This would indicate that member banks have depended more upon their reserves with the Reserve Bank than upon those held with other banks.

The administration of the reserves by the Chicago Bank has been such as to supply Seventh District banks with adequate amounts of credit; on the whole the District has generally borrowed less than the limit set by the basic line calculation. Only on one occasion was the limit approached, i. e., in 1920, during the post-war expansion. At this time the Chicago Bank instituted strict measures to reduce its loans and rediscounts as its gold reserve was being maintained at the legal minimum only by borrowing from other Reserve Banks. Since that time, no expansion of credit has endangered the reserve. In 1933, the Chicago Bank was in a position to aid the hard pressed New York Bank.

Just as the Chicago Bank has supplied the Seventh District with adequate credit, it has maintained, also, an adequate supply of currency. The greatest demand for currenccy in the history of the Bank occurred in 1932 and 1933, the demand being the largest experienced by any Reserve Bank in the System. Despite rumors to the contrary, the Chicago Bank and its Detroit Branch maintained on hand a supply of currency more than sufficient to meet the demands of the period. It has been stated that the collapse of the Detroit banking structure in February, 1933, was due to the inability to get notes from the Reserve Bank. However, it should be noted in this connection that both the Chicago

Bank and the Detroit Branch had more notes on hand than during the previous period and that instead of diminishing in 1933, the amount increased. This does not indicate a shortage. Detroit banking difficulties were more fundamental than a mere lack of currency.

Although the Federal Reserve Bank of Chicago has served the Seventh District well in performing its functions of facilitating business by quickening the movement of funds and providing credit to business through its member banks when such credit was needed, it has failed to assume the position of a regional central bank that the framers of the Federal Reserve Act anticipated would be the place of each reserve bank. In performing one of the most important functions of a central bank, that of credit control, the Chicago Bank has been without the power to protect its own money market against the policies of a sister reserve bank and unable to control fully the expansion and contraction in the Seventh District The Federal Reserve Bank of Chicago, without power in its own money market and disregarded in the councils of the Federal Reserve Board, has been subject to the economic and political policies of the Federal Reserve Bank of New York, either directly or expressed through the Federal Reserve Board. The New York Bank, by maintaining its discount rate above the rate of the Chicago Bank, can attract funds to New York and by reducing its rate, can repel funds, by this means influencing the borrowing by Chicago banks from the Chicago Reserve Bank and thereby nullifying any policy which the Chicago Bank may have decided upon which is contrary to the policy of the New York Bank. The Chicago Bank is prevented from retaliating in kind because the New York money market is much broader than that of Chicago and the uses for funds much more numerous. Therefore, the Chicago Bank cannot attract large amounts of New York money to Chicago since there is nothing to do with it. All it could hope to do would be to bring about a return of Chicago money, which would not greatly interfere with the policy of the New York Reserve Bank. The movements of funds into the Chicago money market are therefore more dependent upon the policy of the New York Bank than upon the policy of the Chicago Bank. As a result of this situation and since the general credit philosophy of the Chicago Bank has tended toward the English system with comparatively high discount rates while the New York Bank has favored low discount rates and easy credit, the policies of the Chicago and New York Banks have often clashed, the clash of interest finding a focal point in the Federal Reserve Board.

The first clash of policies occurred in 1921 when the Board brought much influence to bear for a reduction of the discount rate and an easy pressure for liquidation. The Chicago Bank, fearing

a new outbreak of inflationary movements demurred until political pressure sufficient to swing a bare majority of the directors to that view was possible. Again in 1928 the Bank and the Board came to loggerheads, the Board this time ordering the Chicago Bank to reduce its rate. On each of these occasions the Chicago Bank was combatting a cheap money policy.

On the two occasions where the desire for easy credit resulted in crises, the Chicago Bank has successfully solved its problem of reducing the amount of credit outstanding by the use of moral suasion, other control methods having failed. The Chicago Bank has used this method somewhat more successfully than the other important Reserve Banks, because the officers were especially sincere in its administration. For example, in early 1929 while the discounts of other Banks were rapidly increasing, the Chicago Bank was successfully reducing the indebtedness of its member banks by moral suasion, the rediscount rate being held to 5%.

On the whole, the policies of the Chicago Bank have had little influence on the decisions of the Board, the Board evidently being swayed more easily by the cheap money interests, although on occasions when actual tests arose, the policy of the Chicago Bank always proved the sounder.

It is to be inferred, therefore, that the triumph of the cheap money policy was due to political and economic influence exerted through the Federal Reserve Bank of New York and the Federal Reserve Board. As a result of various changes in the Federal Reserve Act during the past few years which will tend to increase political influence in the formation central banking policy, it is to be expected that the Chicago bank will decline further in importance, since it can no longer express itself vigorously as to policy. In all probability its influence in the money market will decline also as the concentration of funds continues in New York. It appears impossible that a strong regional central bank should develop in Chicago in the light of the existing situation.

Since the Federal Reserve Bank of Chicago, the second largest reserve bank of the System, has found itself increasingly subject to outside control, it is doubtful if any of the ten smaller reserve banks have been of any greater importance in the System. In the light of this situation, it appears reasonable that the expensive and cumbersome administrative machinery of twelve separate Federal Reserve Banks is unnecessary and that the credit and business needs of the United States could be served adequately by one central institution with branches located in the present reserve bank cities with the Federal Reserve Board serving in the capacity of a board of directors.

APPENDIX A

CITIES OF OVER 25,000 INHABITANTS IN THE SEVENTH FEDERAL RESERVE DISTRICT IN 1919 AND 1929

State	25,000 to 50,000 '19	'29	50,000 to 100,000 '19	'29	100,000 to 500,000 '19	'29	Over 500,000 '19	'29	Total '19	29
Illinois	8	8	5	5	—	1	1	1	14	15
Indiana	3	5	6	2	1	4	—	—	10	11
Iowa	3	3	2	1	1	1	—	—	6	5
Michigan	7	6	4	6	1	2	1	1	13	15
Wisconsin	5	6	1	3	1	—	—	1	7	10
Total	26	28	18	17	4	8	2	3	50	56

FARM VALUES IN THE SEVENTH DISTRICT

States	Value of Land and Buildings, In dollars—(000 omitted) 1919	1929	Value of Farm Machinery In dollars--(000 omitted) 1919	1929
Illinois	$ 4,996,688.5	$ 2,740,844.4	$167,462.3	$130,139.9
Indiana	2,318,546.7	1,163,276.2	106,109.5	76,683.4
Iowa	6,679,020.5	4,224,506.0	309,172.3	270,516.1
Michigan	1,304,919.5	1,461,654.3	116,314.9	100,572.2
Wisconsin	1,717,178.9	1,326,028.2	132,199.4	137,937.2
Total	$17,016,354.1	$10,916,309.1	$831,258.4	$717,848.8

VALUE OF AGRICULTURAL PRODUCTS IN THE SEVENTH RESERVE DISTRICT 1919-1929

(In dollars—000 omitted)

States	Field, Orchard and Vegetable Products 1919	1929	Value of Livestock 1919	1929
Illinois	$ 658,382.8	$ 304,916.1	$ 305,681.7	$ 212,826.5
Indiana	400,872.8	159,695.2	198,621.9	144,112.4
Iowa	890,391.2	466,431.7	585,489.5	497,462.6
Michigan	377,129.6	159,117.1	181,031.8	146,415.7
Wisconsin	330,765.6	179,315.7	245,564.1	235,922.2
Total	$2,657,542.0	$1,269,475.8	$1,516,389.0	$1,236,739.4

APPENDIX A—Continued on Page 242

APPENDIX A—Continued From Page 241

MANUFACTURING INDUSTRY IN THE SEVENTH FEDERAL RESERVE DISTRICT 1919-1929

State	Number of Establishments 1920	Number of Establishments 1930	Number of Wage Earners 1919	Number of Wage Earners 1929
Illinois	16,098	13,720	589,092	591,738
Indiana	6,364	4,186	243,263	235,411
Iowa	5,683	3,317	80,551	81,678
Michigan	7,393	6,225	452,987	466,058
Wisconsin	8,489	6,410	225,490	195,948
Total	44,027	33,858	1,591,383	1,570,833

State	Wages in Dollars (000) 1919	Wages in Dollars (000) 1929	Value of Products (000) 1919	Value of Products (000) 1929
Illinois	$ 855,440.2	$ 868,821.2	$ 4,470,285.2	$ 5,447,321.7
Indiana	313,567.5	385,948.3	1,727,566.8	2,437,034.8
Iowa	90,117.1	102,326.0	745,471.7	898,213.2
Michigan	818,952.9	724,716.1	3,433,535.1	4,501,542.8
Wisconsin	341,455.6	245,884.1	1,609,918.9	2,781,669.6
Total	$2,419,533.3	$2,328,695.7	$11,986,777.7	$16,065,782.1

APPENDIX B

SUGGESTIONS FOR THE LOCATION OF FEDERAL RESERVE BANKS MADE BY MIDDLE WESTERN STATES.*

State	Atlanta	Baltimore	Boston	Chicago	Cincinnati	Cleveland
Illinois	186	46	281	384	92	29
Indiana	124	31	149	216	138	23
Iowa	144	27	181	272	41	12
Michigan	52	7	65	87	16	22
Wisconsin	69	23	64	109	19	12
Total	575	134	740	1068	306	98

State	Dallas	Denver	Ft.Worth	Houston	Kan. City	L.Angeles
Illinois	25	293	1	29	101	18
Indiana	21	175	143	9	48	10
Iowa	9	174	4	26	90	20
Michigan	53	62	62	2	90	20
Wisconsin	8	75	2	4	14	4
Total	216	777	212	70	343	72

	Louisv'le	Memph.	Minneap's	N. Orl.	N. Y.	Omaha
Illinois	4	8	125	330	112	6
Indiana	44	5	60	187	216	6
Iowa	1	3	143	207	250	64
Michigan	—	—	38	74	85	5
Wisconsin	2	4	51	93	110	12
Total	51	20	417	891	773	93

	Philadelphia	Pittsburg	Portland	Richmond	St. Louis	St.Paul
Illinois	105	75	62	5	316	39
Indiana	49	47	27	7	168	34
Iowa	70	39	49	2	193	41
Michigan	31	12	25	1	61	9
Wisconsin	32	21	28	1	90	20
Total	287	194	191	16	828	143

	S. L. City	S. Fran.	Seattle	Spokane	Wash., D.C.
Illinois	7	366	112	6	46
Indiana	5	204	82	2	37
Iowa	6	234	86	7	39
Michigan	2	80	70	2	13
Wisconsin	2	106	47	1	2
Total	22	990	397	18	137

*Letter from Federal Reserve Organization Committee transmitting briefs and arguments presented to the Organization Committee relative to the location of the Reserve Districts in the U. S. 63rd Congress, 2nd Session, Document No. 485, p. 339.

BIBLIOGRAPHY

AMERICAN ACADEMY OF POLITICAL SCIENCE
The Annals, January, 1922.

AMERICAN ACCEPTANCE COUNCIL
Monthly Bulletin 1924-1934

AMERICAN BANKERS' ASSOCIATION
Annual Report 1912-1915

AMOS, J. C.
Fixing the Discount Rate at the Federal Reserve Bank of Chicago.

A Master of Arts Thesis in the Library of the University of Illinois, Urbana, Illinois.

ANNALIST (THE)
1927.

ARGUMENTS PRESENTED TO THE ORGANIZATION COMMITTEE
Relative to the Location of Reserve Banks in the United States.

Document No. 485 Second Session of 63rd Congress.

U. S. Government Printing Office—1913.

BANKING LAW JOURNAL
1917-1923

BECKHART, B. H.
The New York Money Market Vols. II, III and IV. Columbia University Press, 1932. New York City, N. Y.

BEFORE THE FEDERAL RESERVE BOARD
Brief in Behalf of the Petitioning Banks in Wyoming and Nebraska to be Transferred from Federal Reserve District No. 10 to Federal Reserve District No. 7.

Brief in Behalf of Petitioning Banks in Wisconsin in the Matter of Petitioning Banks in Wisconsin to be Transferred from Federal Reserve District No. 9 to the Federal Reserve District No. 7.

Brief in Reply to Petitioners in the Matter of the Transfer of Certain Banks from District No. 9 to District No. 7.

BURGESS, W. R.
The Federal Reserve Banks and the Money Market. Harper and Brothers, 1927. New York City, N. Y.

CHAPMAN, JOHN M.
Fiscal Functions of the Federal Reserve Banks. Ronald Press, 1923. New York City, N. Y.

COMMERCIAL AND FINANCIAL CHRONICLE
1913-1934

CONFIDENTIAL REPORT No. 243
U. S. Government Printing Office—1914, Washington, D. C.

CHICAGO BOARD OF TRADE
Annual Report, 1910-1934

CHICAGO JOURNAL OF COMMERCE
1927

CHICAGO TRIBUNE
1913-1915

DUNBAR, CHARLES F.
Theory and History of Banking (Fourth Edition)
C. P. Putnam's Sons, 1922. New York City, N. Y.

FEDERAL RESERVE BANK OF CHICAGO
Annual Report, 1915-1934
Monthly Report of Business Conditions, 1918-1934.
Uncatalogued Data on the Shelves of the Library of the Federal Reserve Bank of Chicago.

FEDERAL RESERVE BOARD
Annual Report, 1914-1934.
Federal Reserve Bulletin, 1915-1934.
File of Documents Pertaining to the Organization of the Federal Reserve Banks.
Records of the Gold Settlement Fund.

FOULKE, ROY A.
The Commercial Paper Market.
Bankers' Publishing Co. 1931. New York City, N. Y.

GLASS, CARTER
An Adventure in Constructive Finance
Doubleday and Co., 1921. New York City, N. Y.

HARRIS, S. E.
Twenty Years of Federal Reserve Policy
Harvard University Press, 1933. Cambridge, Mass.

HOUSTON, E. M. AND RUSSELL, ANDREW
History of Banking in Illinois.

ILLINOIS BANKERS' ASSOCIATION
Annual Report, 1913-1915.

ILLINOIS, STATE OF
An Act to Revise the Law in Relation to Banks and Banking.
Annual Report of the Auditor, 1910-1934.

UNIVERSITY OF ILLINOIS
Bureau of Business Research. Bulletins Nos. 17 and 39.

UNITED STATES CONGRESS
House of Representatives—Banking and Currency Committee
Hearings on H. R. 7834. 63rd Congress.
Report of Joint Commission of Agricultural Inquiry—1922
Senate—Banking and Currency Committee
Hearings on S. 2639. 63rd Congress.
Hearings on Senate Resolution No. 71. 71st Congress, Third Session.

UNITED STATES DEPARTMENT OF THE TREASURY
Annual Report of the Comptroller of the Currency, 1930-1934.

WILLIS, H. PARKER
The Federal Reserve System
Ronald Press, 1923. New York City, N. Y.

WILLIS, H. PARKER AND CHAPMAN, J. M.
The Banking Situation
Columbia University Press, 1934. New York City, N. Y.

WILLIS, H. PARKER AND STEINER, W. H.
Federal Reserve Banking Practise
The Appleton Co. 1926. New York City, N. Y.

WOODWORTH, GEORGE W.
The Detroit Money Market
University of Michigan Press. 1932. Ann Arbor, Michigan.

INDIANA, STATE OF
Indiana Blue Book, 1913-1934

IOWA, STATE OF
Iowa Code
Annual Report of the Banking Department, 1913-1934

KILBOURNE, D. K.
Money and Banking
A. W. Shaw, 1929, Chicago, Illinois.

LAUGHLIN, JOSEPH L.
The Federal Reserve Act: Its Origin and Problems
Macmillan Co. 1933. New York, N. Y.

MARSHALL, ALFRED
Principles of Economics
Macmillan Co., 1930. London, England.

PICKETT, RALPH R.
Federal Reserve Bank Policy In Iowa
University of Chicago Press. 1931. Chicago, Illinois.

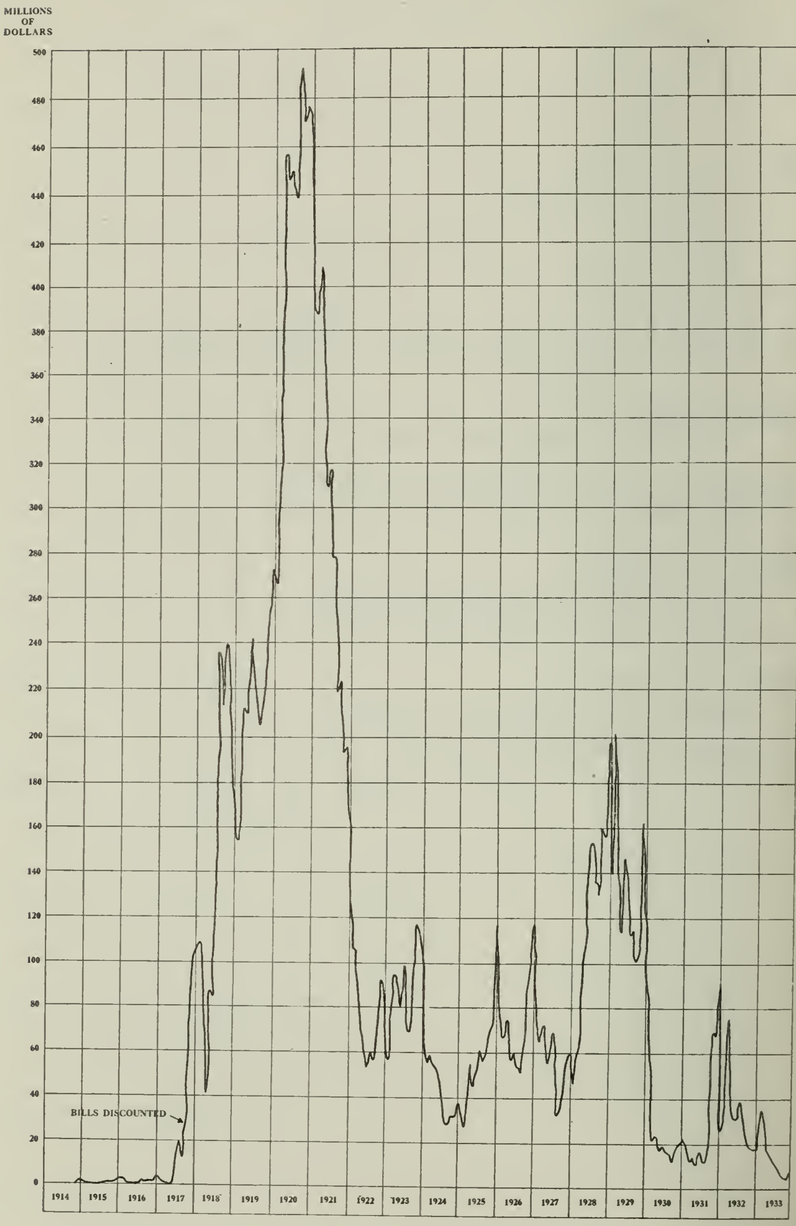
READ, L. M.
The Story of Commercial Paper

SECURITY DEALERS OF NORTH AMERICA
1924, 1930 and 1933.

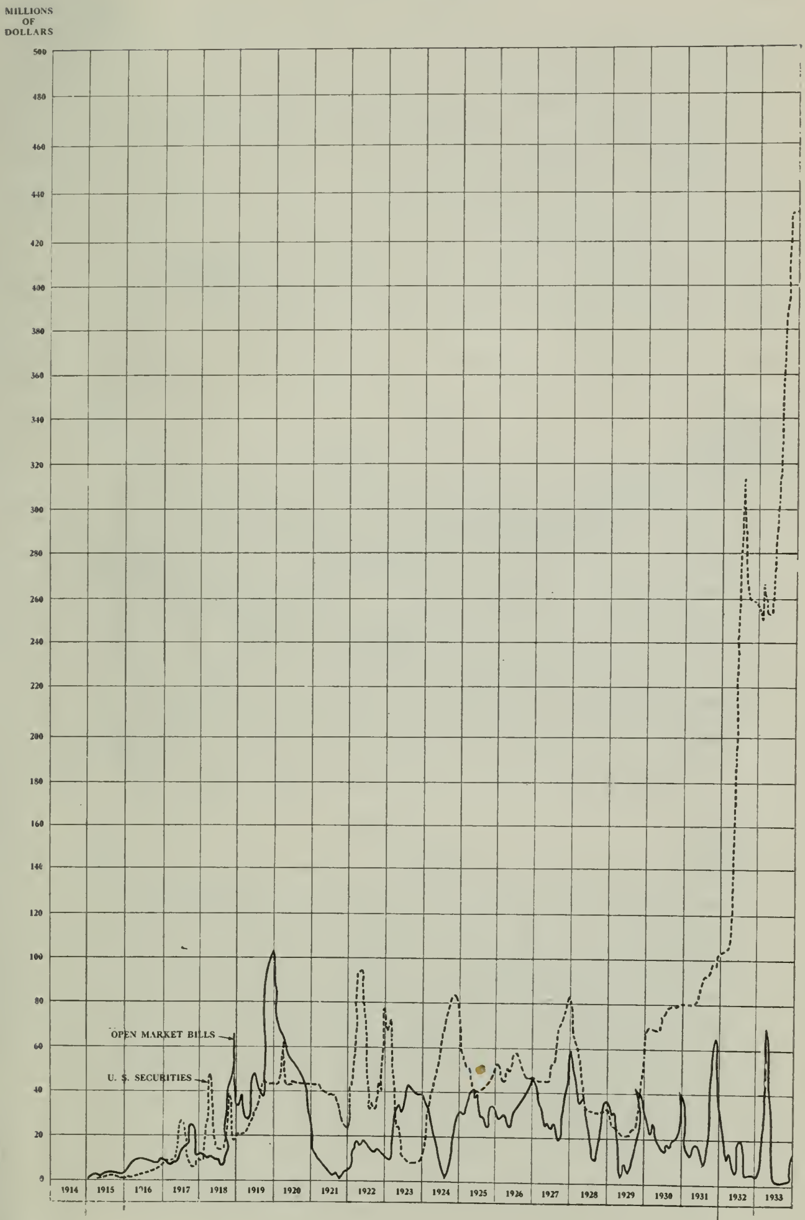
SMITH, J. RUSSELL
Industrial and Commercial Geography
Henry Holt, 1925. New York City, N. Y.

SPAHR, WALTER E.
Clearance and Collection of Checks
Bankers' Publishing Co., 1926. New York City, N. Y.

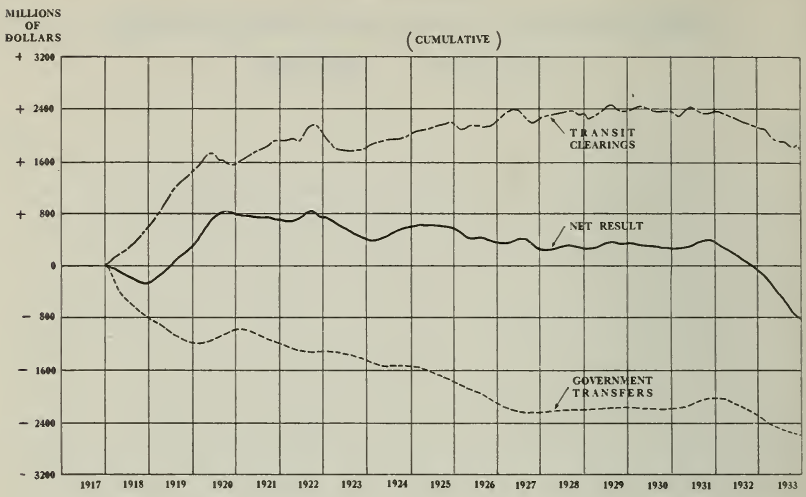
Earning Assets of the Federal Reserve Bank of Chicago. 1914-1933.

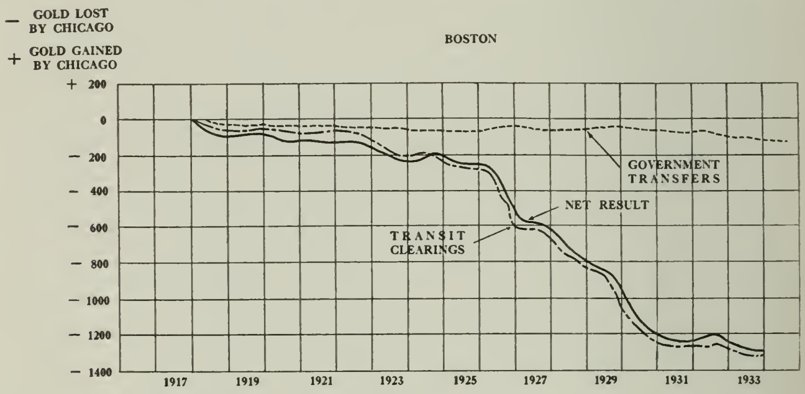


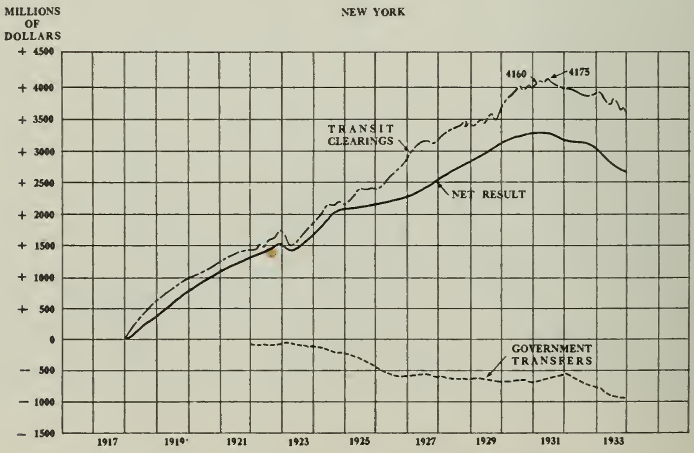
Earning Assets of the Federal Reserve Bank of Chicago. 1914-1933.



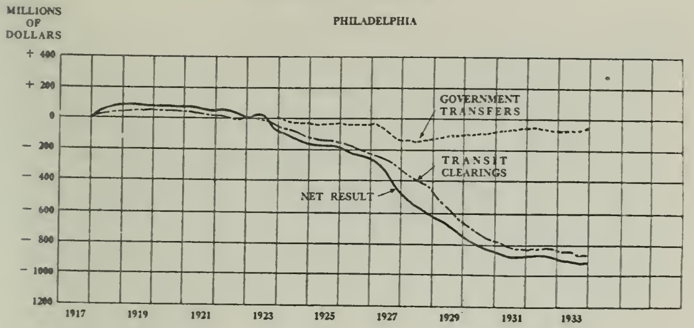
Gold Movements Between the Chicago District and the Remainder of the Country

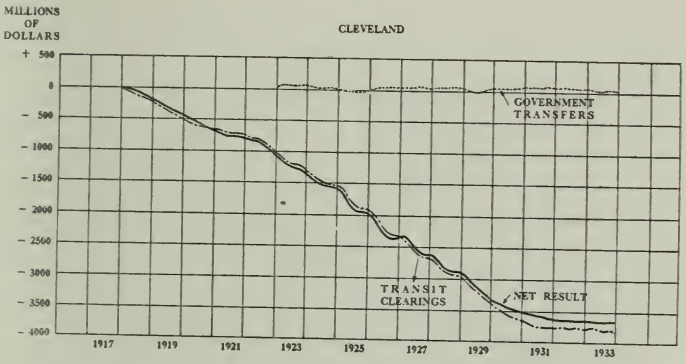


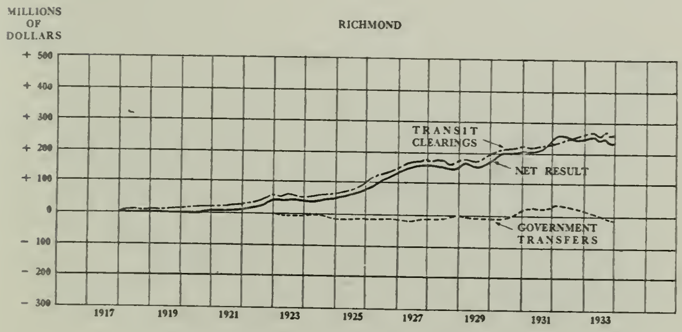




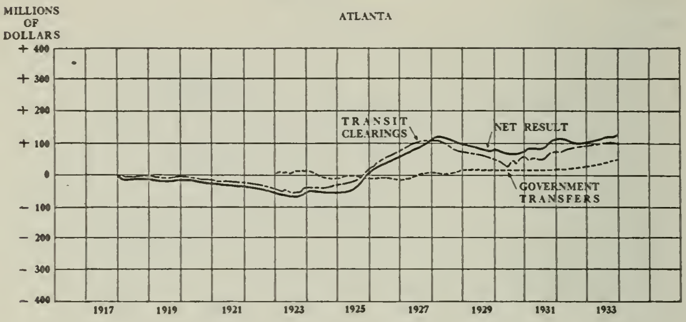
Gold Movements Between the Chicago District and the Remainder of the Country

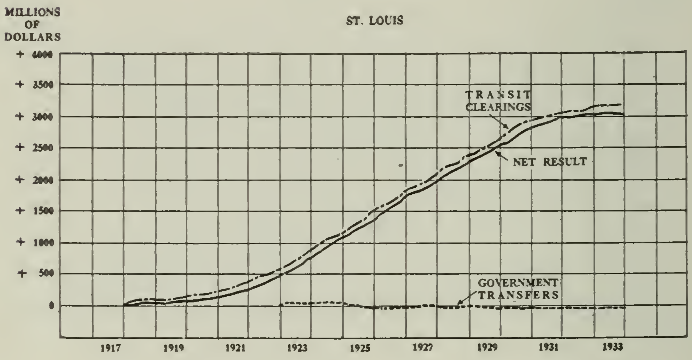


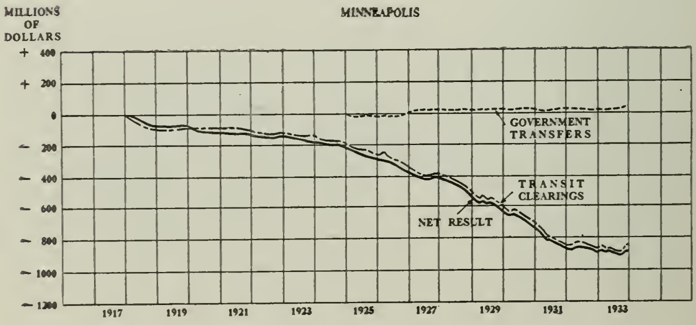




Gold Movements Between the Chicago District and the Remainder of the Country







Gold Movements Between the Chicago District and the Remainder of the Country